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THE BASIS OF ALLERGIC PHENOMENA *

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Broadly speaking, allergic phenomena are the manifestations of an altered reaction of the organism, and include all the phenomena of hypersusceptibility. For convenience, they may be divided into two classes, (1) the anaphylactic and (2) the anaphylactoid. Present methods reveal certain features that appear to constitute differences, if not difficulties, in reconciling the two classes of reactions on a common basis. The differences are frequently exaggerated through the employment of vague and loose terminology. Many difficulties arise from lack of sufficient evidence. On the other hand, there are numerous evidences scattered throughout the literature, including some explanations that are worthy of consideration because they help to clarify the nature of these reactions. The important bearing of the subject on biologic phenomena, that is, in understanding the nature of cellular function and responses to different kinds of agents and stimuli, including pharmacologic phenomena, and in therapeutics, has prompted me to summarize briefly the available evidence, some of which is too commonly neglected. In view of all the circumstances, therefore, it is believed that such a summary will prove of interest in helping to understand the allergic phenomena.

The literature pertaining to the subject is too vast to be considered in detail here. Much of this, including the historical aspects, has been covered in recent reviews of anaphylaxis by H. G. Wells (1921) and Doerr (1922), and will be omitted. The scope and purpose of this paper will necessitate adherence to essential facts and criteria. We may begin by considering the characteristics of the so-called specific anaphylactic phenomenon, then proceed to the nonspecific or anaphylactoid phenomena, then consider the probable common basis on which they rest and some pharmacological analogies, and finally indicate their practical importance and bearing.

CHARACTERISTICS OF ANAPHYLAXIS AND ANAPHYLACTIC SHOCK

1. A native or complex protein is required, various polypeptids up to octapeptid being ineffective on reinjection. On and after the first injection of heptapeptid (hexaglycylglycin), a skin disease characterized by eczema, falling out of hair and necrosis and healing in four weeks occurs in guinea-pigs (Abderhalden and Weil). Tetraglycylglycin and diglycylglycin do not sensitize guinea-pigs (Zunz).

2. Parenteral administration is most efficient, but not absolutely indispensable, as indicated by experimental results with oral administration of egg albumin and horse serum in young guinea-pigs (Shin Maie), clinical results in children (Sztark; Makaroff; Gerstenberger and Davis; Gerstenberger; Clearkin), and transfer of allergy to child by mother's milk (van Leeuwen, Bien and Varekamp; Shannon).

3. A period of incubation is necessary for the development of hypersensitivity.

4. This responds typically to reinjection of the same protein with symptoms of anaphylactic shock.

5. The symptoms of shock vary qualitatively and quantitatively with the species and method of injection of the protein, intravenous injection being most effective and commonly used.

6. Hypersensitiveness is transferable to unsensitized animals by transfusion of blood or serum (passive anaphylaxis), but the shock syndrome is mild and slow in development, requiring from twenty-four to forty-eight hours in guinea-pigs, and anchoring of antiserum is not demonstrable, contrary to the belief of many authors (Shiga).

7. Hyperexcitability of smooth muscle of certain excised organs freed of blood is demonstrable, as indicated by bronchial constriction in the perfused guinea-pig lung, increased contractility of strips of excised guinea-pig uterus, constriction of pulmonary arteries in rabbits' lungs, contraction of hepatic veins with increase in liver volume of cats and dogs, and increase in tone, or intraluminal pressure, of intact dog intestine and bladder (Manwaring, Hosepian, Enright and Porter). Therefore, the seat of the reaction is peripheral and localized in the tissues.

8. Histologically, the lungs in guinea-pigs show the presence of marked emphysema, distention and rupture of alveoli, reduction in bronchial caliber, and occasional hemorrhages; emboli and thrombi are denied by some, but platelet thrombi in pulmonary and hepatic capillaries are reported by Zunz, and in hepatic and cerebral vessels by von Behring.

9. Definite disturbances in the physical and chemical mechanisms of the blood, plasma and lymph are demonstrable during shock.

Physical Changes.—The coagulation time is variable, but generally tends to be prolonged in dogs and guinea-pigs (Shattuck). Increases in concentration of the blood and nucleated corpuscles in dogs (Richet, Brodin and St. Girons), marked thrombopenia in guinea-pigs (Piana; Zunz and van Geerthruyden-Bernard), leukopenia followed by leukocytosis in dogs (Dean and Webb), leukopenia in pigeons (Arloing

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and Langeron) and eosinophilia in guinea-pigs during the hypersensitive stage (Bose) are demonstrable. Flocculation of the plasma colloids or micellae is demonstrable by the agglutinoscope and dispersimeter but not microscopically (Lumière; Kopaczewski; Kopaczewski and Bern). The surface tension of serum in guinea-pigs is lowered (Kopaczewski); the viscosity of the blood is increased without change in plasma viscosity; the surface tension of the plasma is lowered, and the refractometric index of plasma and congelation capacity are moderately increased (Zunz and La Barre). Flocculation of the serum globulin in the circulating blood and on the pulmonary endothelium in guinea-pigs, together with conglomeration of leukocytes, platelets and globulin, are reported by Zunz. The resistance of erythrocytes toward hypertonic sodium chlorid, and sedimentation speed are diminished, and colloidal behavior of globulin is altered (Wittkower).

Incubation of the serum of a sensitized animal together with the antigen (protein) results in the formation of a precipitate or flocculation, which agrees with flocculation of the plasma in vivo. The precipitin may dissolve in an excess of the antigen (egg white and serum) in vitro (Opie), suggesting a possible physical basis for desensitization or antianaphylaxis.

Chemical Changes.—The following are reported: immediate and progressive acidosis, with diminution in carbon dioxid capacity of plasma before and during shock, death being prevented or mortality reduced by administration of sodium bicarbonate to dogs and guinea-pigs (Eggstein); increase in amino-acids, nonprotein nitrogen, serum albumin and hydrogen ion concentration (acidity), with no change in globulin and proteose content, and decrease in fibrinogen and fibrin enzyme in guinea-pigs (Wittkower); increase in amino-acid and urea nitrogen in the blood of anaphylactic and peptone treated guinea-pigs (Hisanobu), and of aminonitrogen in the uncoagulated blood of dogs in shock (Zunz and György); diminution in alkalinity (Zunz and La Barre; Hirsch and Williams), with corresponding lowering of surface tension of the plasma, this being greater, the more marked the symptoms of shock in guinea-pigs, according to Zunz and La Barre. However, changes in the alkali reserve and ammonia of the blood in guinea-pigs were not detected by German. In rabbits, increased nonprotein nitrogen, urea and creatinin of the blood in anaphylactic shock are reported by Major. Increase in the non coagulable nitrogen of the liver in guinea-pigs is reported by Pick and Hashimoto, but denied by Barger and Dale. Abnormal nitrogen elimination in excess of nitrogen injected persists for several days in rabbits during shock (Manoflov). Disturbances in nitrogen equilibrium, total solids, blood sugar and p_H values are reported by Rohdenburg, Krehbiel and Bernard. The lipoid content of the plasma is also modified (Jung and Wolff).

10. Desensitization or antianaphylaxis can be produced systemically and locally by treatment with small and increasing or large doses of homologous and heterologous proteins and a variety of other agents and conditions; and any of them is apt to prove successful in clinical practice (Abrami).

11. The immediate cause of death in guinea-pigs is asphyxia from bronchoconstriction, and in dogs and cats, circulatory collapse from deficient blood supply to the heart. The ultimate cause is referred by Kopaczewski to tissue asphyxia in consequence of more or less complete flocculation, edemas, capillary embolism, etc., which obstruct the capillary network.

12. Concerning the elaboration of an anaphylactic poison, namely, "anaphylatoxin," "serotoxin," "apotoxin," "proteotoxin," "peptone," "histamin," "taraxogen" or toxin from disturbed ferment-antiferment balance or ferment action, etc., which has been assumed or suggested by several authors to occur on reinjection of the antigen, and be responsible for the symptoms of shock, none have ever been isolated or demonstrated, all of those suggested being purely hypothetic substances, except histamin and peptone.

This practically disposes of all the theories of shock that concern themselves with specificity (substances or conditions), and leaves the cellular antibody antigen reaction as the simplest conception underlying the shock phenomena, although the interpretation of this by some is still in the specific sense. However, by others it is conceived of as a physical and more universal and nonspecific process (Doerr). Considerable support for the latter conception will be seen in the following summary of anaphylactoid phenomena:

CHARACTERISTICS OF ANAPHYLACTOID PHENOMENA[1]

Synonymous with this group are reactions, nitritoid crises, idiosyncrasies, hemoclasis, colloidoclasis, the responses of foreign protein, nonprotein, colloid, irritant, protoplasmic activation, proteoclastic, autohemotherapy, hemotherapy and osmotherapy, atopy, allergy, etc. Provocative or causal factors are disease and other conditions, and various agents. Among disease conditions reported as allergic manifestations are urticaria, angioneurotic edema, dermatoses, asthma, hay-fever, purpura, Ménière's syndrome, rheumatism, gout, intermittent hydrarthrosis, arthritis, hypotension, migraine, malarial attacks, serum disease and various protein intoxications and systemic disturbances from trauma, burns, menstruation and in pregnancy.

1. A variety of agents unrelated physically and chemically are effective, native or complex proteins not being required.

The following have been reported or demonstrated to be effective, especially when injected intravenously: nonnitrogenous colloids (agar, tragacanth, pectin, gelose, starch, acacia); colloidal metals and their salts (iron, collargol, arsenous sulphid, mercuric oxid and sulphid, gold); tissue extracts (lung, testicular, coagulen, thromboplastin); serums (beef, human, eel); nitrogenous colloids and mixtures (agar-ized serum, plant juices, and proteins, peptones, proteoses, pancreatin, milk, casein, peptonized milk); organisms and vaccines (bacteria, kala azar, trypanosomes, tuberculin, antityphoid vaccine); arsphenamin; coal-tar derivatives (acetylsalicylic acid, paraphenylendiamin [Ursol], antipyrin), histamin; salts of heavy metals (copper sulphate, antimony and potassium tartrate), adsorbents (kaolin, India ink, charcoal, barium sulphate, fullers' earth; salts (iodid, nucleate, citrate, oxalate, bromid, protalbinate); hypertonic solutions (10 per cent. sodium chlorid, glucose and sucrose, 50 per cent., hexamethylenamin, 40 per cent.); tannin; glacial acetic acid; congo red; copaiba; gentian violet; camphor oil; ricin; tincture of iodin; iodoform, and alkaloids (quinin, emetin).

Calcium salts do not cause anaphylactoid phenomena in guinea-pigs. They prevent or inhibit experimental edemas and clinical allergic manifestations, owing presumably to their power to lessen cellular permeability and indicating indirectly, therefore, the possible physical basis for the reactions produced by many agents.

2. The phenomena occur chiefly, but not exclusively, after intravenous injection, intraperitoneal and hypodermic injections also being effective, though much more slowly and less intensively. Intracarotid and cardiac injections are highly effective.

3. A period of incubation, and sensitization or preliminary injection are not required, the effects occurring immediately or rapidly after injection, if at all.

4. The symptom complex is similar to and almost indistinguishable from that of anaphylactic shock in

1. Many references not entered here will be found in the papers by Hanzlik and Karsner.

guinea-pigs, and from certain agents (histamin, peptone) is similar to that in dogs and cats.

5. The symptoms vary with the species, form and dosage of the agent, functional state and method of administration, uniformity of response in different species being favored by intravenous injection.

Intraperitoneal administration is effective with copper sulphate, glacial acetic acid, histamin, and hypodermic with serums tissue extracts, histamin, proteins, secretions (milk), oxalate and colloidal metals. Out of fifty-three agents representing all the different classes in "1," the majority (or forty-five) gave definite symptomatic responses by intravenous injection in guinea-pigs (Hanzlik and Karsner). Intracardiac and carotid (cerebral) injections are also effective with serums, agar, barium sulphate, arsphenamin (Lumière and Couturier). With certain agents (agar, starch, acacia, tissue extracts, peptone, arsphenamin, histamin, milk serums, antityphoid vaccines, citrate, collargol, oxalate, barium sulphate, copper sulphate) nearly identical symptoms have been demonstrated in at least two and usually three out of the following several different species: guinea-pigs, pigeons, rabbits, dogs, horses, goats and man (except barium sulphate [Loewit; Hanzlik and Karsner; Bouquet; Zunz; Bordet, Dale and Kellaway; Lumière, Dunn and many clinical reporters]). Guinea-pigs, horses, goats and man respond readily, pigeons less, and rats are refractory. The symptoms consist of increased reflex excitability, rapid respiration and dyspnea, sneezing, retching, jerky spasms, slowing or acceleration of the heart, trembling, expulsion of urine, cyanosis, pupillary relaxation, convulsions, and death with the larger doses. A fall of blood pressure with slowing and increase or decrease in volume of the heart occurs, depending on the severity of the response and extent of pulmonary blockage. Marked pulmonary inflation with edema, emphysema and frequently hemorrhages occur in guinea-pigs and dogs. Increase in pulmonary arterial pressure is demonstrable after histamin, peptone and tissue extracts, due to reduction in bronchial caliber from spasm and edema or thrombi or both (Abe), and after arsphenamin in dogs (Jackson and Smith). In unanesthetized dogs, the fall of systemic blood pressure from primary albumose (peptone) and histamin is accompanied by reddening of the skin (capillary and venule relaxation) and edema of the face and head (Abel and Geiling; Geiling and Kolls). Increase in temperature in animals is produced by the intravenous injection of finely divided starch, animal charcoal (Albert and Stricker; Billroth) and by colloidal suspensions of silver, iron and arsenic, paraffin (Bock, Heubner and Frey) and "anaphylatoxin" (Friedberger). Hypodermic injections of albumose, peptone, serum, organ extracts, milk and casein also raise the temperature (Matthes; Krehl and Matthes).

In human subjects, a considerable range of symptoms of variable severity occurs; namely, general excitation, sweating, precordial distress, tremors, cough, dyspnea, chill, chattering of the teeth, flushing of the skin (face), rapid pulse, increase in the temperature (fever), nausea, vomiting, vertigo, headache, joint pains, cyanosis, fall of blood pressure, collapse and sometimes death. Deaths are reported from arsphenamin, collargol (Lesné) peptone, serums, antityphoid vaccine, acacia (Lee; Olivecrona) and camphor oil (Fabricius) intravenously. From 30 to 50 per cent. of patients receiving citrated blood show reactions (Lederer, Lewisohn). In this connection it is interesting to note that the toxicity of citrated blood is subject to physical influences, for it was noted by Freund that citrated blood, if untouched, is nontoxic, but if shaken with beads, toxicity develops, causing a fall of blood pressure, cardiac depression in intact animals and constriction of the peripheral arteries, uterus and intestine

6. Increased sensitivity is believed not to be transferable by transfusion of blood or serum of treated to untreated animals. However, such an experiment could not be decisive because the intravenous injection of many agents alone suffices to produce the anaphylactoid phenomena, wholly or partially.

7. Increased excitability of smooth muscle of excised organs has not been demonstrated directly with the majority of agents in "1." Exceptions are histamin, peptone, serums, tissue extracts, congo red and quinin, which tend to increase the excitability; and certain paradoxical actions in which the response of an organ is only obtained, or altered to an agent, by previous treatment with a relatively inert substance. Many such instances are known in pharmacology and will be dealt with separately. Here it should be noted that the failure to obtain actions with certain agents on excised organs may be attributed to the failure to establish the proper conditions.

8. Histologic changes, especially in the lungs of guinea-pigs, are more prominent than in those of anaphylactic shock, being characterized by reduction in bronchial caliber, congestion, hemorrhages, emboli and thrombi composed of platelets, red blood corpuscles and fibrin and perivascular and peribronchial edema.

9. Definite and marked disturbances in the chemical and physical mechanisms of the blood and tissues are demonstrable with a variety of agents, being in some respects more striking than those of anaphylactic shock.

Physical Changes.—The coagulation time of shed blood may be unchanged or prolonged, depending on the nature of the agent and extent of platelet agglutination or destruction or both. The following tend to lessen coagulation: kaolin, charcoal, peptone, protalbinate, arsphenamin, oxalate (Hanzlik and Karsner), and toxified agar (Zunz and La Barre). Arsphenamin prevents coagulation in vitro and in vivo, perhaps by direct combination with fibrinogen (Anwyl-Davies and Mellanby). Intravascular clotting occurs from lung extract (Mills) and human plasma (Levinson) intravenously in rabbits and guinea-pigs, respectively. Increase in coagulability from 10 per cent. sodium chlorid intravenously is reported by Schenk. Leukopenia, followed by leukocytosis and eosinophilia, occur as in anaphylaxis, also with 10 per cent. sodium chlorid (Hauer).

Agglutination of platelets, with increase in number, or followed by their disappearance, presumably depending on the time of observation, is a common phenomenon in several species and with different agents; namely, with agar and starch "anaphylatoxins" in guinea-pigs (Dale; Dale and Kellaway); with different agents from each of the groups in "1" in pigeons (thrombocytes [De Eds and Somerfield]); with nitrogen-free agar toxified (Bordet and Zunz), and with histamin in cats (Dale and Laidlaw). In hemoclastic crises, the number of platelets is reported to be diminished (Cattoretti) Agglutination in reactions of patients to citrated blood is asserted to be present by Lederer.

Hemagglutination occurs with many agents in vitro, and correlates to a considerable extent with the occurrence of thrombi and emboli from the same agents in vivo, including such diverse agents as agar, acacia, histamin and arsphenamin and many others (Hanzlik and Karsner; Jean Oliver et al).

Rapid sedimentation or suspension instability of red blood corpuscles of drawn blood is intimately connected with the agglutination of corpuscles, or platelets and corpuscles together. The phenomenon is essentially a flocculation due to an alteration of the surfaces of the red blood corpuscles by a number of physical changes known to influence corpuscles and to occur in the blood and plasma; namely, changes in viscosity, reaction (p_H), ratio of albumin to globulin and also to fibrinogen, lipoid and salt content of the blood and plasma, the reduction of electrical charges, adsorption on and swelling of the corpuscles, the isoelectric point of the proteins, etc.

Flocculation of the plasma and serum, and in the blood, is reported to occur from injected agents, chemically indifferent, such as peptone, agar and starch, and just as in anaphylactic shock (Gautrelet). The flocculation is not always recognizable by ordinary methods, requiring special apparatus (agglutinoscope) or arrangements for a demonstration of it, and even intracardiac injection tests after treatment of the solution by electrophoresis just short of visible flocculation (Lumière). Treatment of serum with pectin and gelose (agar) (Kopaczewski and Gruzewska) causes flocculation in vivo, and this as well as the toxicity can be prevented by lowering the sur-

face tension or increasing the viscosity of the fluid. The stability of plasma can be altered by acids, alkalis, neutral salts, pepsin, peptone, agar, acacia, gelatin and glycin, and also by increase in temperature (Starlinger). Against the assertion of several authors that flocculation bears on toxicity is the statement by Neuweiller that the occurrence of flocculation in both active and inactive serums by agar, starch and bacterial suspensions did not parallel poisoning or detoxicating action.

The physical changes in blood and plasma resulting from the injection of foreign agents, serums, etc., are increase in viscosity, and lowered surface tension of the blood, the plasma being unchanged in guinea-pigs receiving serum treated with agar (Zunz and La Barre). Increases in viscosity of the plasma and fibrinogen, decrease in surface tension and changes in the ratio of albumin to globulin (increased globulin), are reported after injections of proteins by Löhr and Löhr.

Chemical Changes.—Dilution of the blood, diminution in carbon dioxid, increased hydrogen ion concentration (acidity), unchanged urea nitrogen with agents from all the groups, and variable phosphate and increase in lactic acid contents of blood with some agents in "1" occur in dogs injected intravenously (Hanzlik, De Eds and Tainter). Such bloods show simultaneous physical changes of darkening, hemolysis and rapid sedimentation and agglutination of corpuscles. Partial confirmation of these changes in chemical composition of the blood is seen in the report of Denis and von Meysenburg, who found a decrease in carbon dioxid content and lowered p_H values (from 7.4 to 7.28, acid tendency) after injections of sodium chlorid and sodium sulphate in dogs, sodium bicarbonate ($NaHCO_3$) having produced opposite changes. Convulsive movements occurred after all these salts. Urinary changes in the expected direction after injection of phosphate in fasting dogs are reported by Hendrix and Saunders; namely, increase in renal excretion of titratable acid and ammonia, the combining power of the blood being increased. Increase in noncoagulable nitrogen of the liver in normal guinea-pigs after subcutaneous injection of horse serum, caseosan, peptone and venesection is reported by Freund and Rupp, and in this increase the central nervous system appears to be involved because section of the cord in rats and guinea-pigs also produced a sudden increase in the liver nitrogen (Freund and Laubender). The lipoid equilibrium of the blood appears to be disturbed by peptone, as indicated by increases in the total fatty acids content (Jung and Wolff), and in the phosphatid and cholesterin content of the blood for several hours in patients after receiving injections of small doses of collargol, caseosan, hypertonic sodium chlorid, glucose, sucrose, argochrome and horse serum, while larger doses gave a preliminary decrease followed by an increase (Grabbe). In peptone shock of dogs, the free and combined uric acid of the plasma are reported to be increased (Hédon, Cristol and Nikolitsch). Large increases in blood urea are reported by Marie after subcutaneous injections of lecithin, cholesterol, nicotin, quinin, morphin, colloidal silver and ether. Intravenous injections of milk and serum into young animals is always accompanied by changes in the hydrogen ion concentration (p_H) of the serum, but repeated injection restores the p_H to normal, according to Mendeleef. Injections of 0.25 per cent. gelose and 10 per cent. peptone also produce a marked fall in p_H value of the blood, lowering of the values apparently being produced with successive injections only if some colloid is employed (Mendeleef). In children, intramuscular injections of boiled cow's milk and of plant protein appear to increase the intermediary metabolism, as indicated by increased elimination of acid phosphate (lowered p_H values) and ammonia followed by an increase in alkalinity in the urine, and prevention or reduction of epinephrin hyperglycemia during the alkaline phase (Vollmer). Marked increases in respiratory gas exchange and heat production with increase in temperature by from 1 to 1.5 C. lasting from four to eight hours are reported by Sänger after intravenous injection of milk into dogs. During shock from the intravenous injection of typhoid vaccine into patients there is an increase in urea nitrogen and nonprotein nitrogen, and decreases by from 4 to 8 per cent. of the carbon dioxid combining power of the plasma up to 150 mg. of total lipoids, and of sugar from 10 to 30 mg. per hundred cubic centimeters of blood (Greenthal and Brown). Intravenous injections of typhoid vaccine into patients (eight), and of typhoid vaccine and proteoses into dogs greatly reduce the alkali reserve of the plasma during the shock symptoms, and administration of sodium bicarbonate retards the fall of alkalinity and relieves the distressing symptoms, according to Eggstein.

10. Desensitization (prevention of the shock syndrome or reactions from different substances) can be produced by a variety of agents, some of which act by preventing flocculation or aggregation and other physical changes in the blood and tissues, and others by alleviation of circulatory and respiratory symptoms. Desensitization by the administration of small doses of various drugs, namely, antipyrin, quinin, acetylsalicylic acid, arsphenamin, etc., is claimed by many clinical observers. Lumière and Conturier report protection against fatal shock from barium sulphate suspension by preliminary intracardiac injection of serum and vice versa; that is, successful protection against protein anaphylactic shock by preliminary injection of barium sulphate (before antigen) and also against shock from gelose (agar) treated serum. If this is true, the method of preliminary injection of small doses of protein antigen in preventing anaphylactic shock indicates nothing peculiar or specific about the procedure. Violle, however, reports that antianaphylactic vaccination was not effective with the colloidal metals in guinea-pigs and rabbits.

11. Death in animals receiving intravenous injections is due to circulatory collapse and paralysis of the respiratory center from the asphyxia resulting from bronchial and alveolar compression and impaired ventilation, due in turn to blockage of the pulmonary capillaries by stasis, emboli, thrombi, endothelial adsorption of agglutinated masses, peribronchial and perivascular edemas, hemorrhages, etc., and perhaps capillary blockage in other organs, especially the liver, brain and medulla (Loewit; Hanzlik and Karsner; P. Schmidt; Kopaczewski; Zunz, von Behring, et al).

12. Concerning the elaboration of toxic substances as a result of the injection of various agents causing anaphylactoid phenomena, none occur or are demonstrable. Many of the agents provoking the reactions are themselves relatively inert chemically and pharmacologically, except when administered parenterally, usually intravenously. The nearly identical systemic reactions and histologic changes from totally unrelated agents, such as agar, histamin, kaolin, copper sulphate and proteins, speak against the production of a common toxin, but rather indicate the operation of some common physical cause or causes.

PROBABLE COMMON BASIS

From these summaries it is indicated that nearly identical symptomatic, blood and tissue changes characterize the groups of anaphylactic and anaphylactoid phenomena. There are two features, namely, the period of incubation and the hyperexcitability of isolated smooth muscle, that appear to be peculiar to anaphylaxis. The period of incubation is unnecessary with all, and the hyperexcitability of excised smooth muscle has not been demonstrated with many of the agents causing anaphylactoid phenomena. Among those which can produce direct stimulation of smooth muscle are peptone, histamin, certain serums (old and specially treated), certain tissue extracts, and congo red. All of these agents or their constituents and most drugs that can stimulate muscle directly are composed of smaller molecules or aggregates than the fresh native serums and the complex colloids such as agar, acacia and others which do not stimulate because they diffuse slowly and cannot penetrate or alter cell surfaces readily and react

with the muscle substance. Or, in other words, the apparent lack of muscular stimulation by certain of these agents (using ordinary experimental methods) may be due to a lack of suitable conditions enabling them to diffuse into and penetrate the cell surface and react with the muscle substance. The slow diffusion, reaction and penetration of native protein (serum) used as "sensitizer" in anaphylaxis requires time, and, hence, the time interval or incubation period for alteration of the muscle and other cells, rendering them more readily and promptly permeable to the reinjected protein (homologous or heterologous). Thus, it seems that the differences can be reconciled according to some physical conception of the mechanism underlying both sets of phenomena. This may be conceived of as having to do essentially with the state (fineness of dispersion) and reactivity of agent and of cellular permeability, and would be the same for the anaphylactic reaction from protein and the anaphylactoid reactions from various agents. These matters have not been tested in the special cases at hand, but are known to be applicable in other directions in biology, and the idea will be developed further on.

Another difference pertains to the histologic changes, especially in the lungs, which appear to be expressed qualitatively and quantitatively differently in the two sets of phenomena. That is, the changes seem to be less evident and extensive in anaphylactic shock, as indicated by flocculations, less pronounced edemas, irregular hemorrhages and embolism, as compared with the more marked and uniform agglutinations, emboli and thrombi, hemorrhages, and edemas among the anaphylactoid phenomena. There is no doubt that the changes that have been described by morphologic methods (especially when employed conjointly with physiologic methods) have assisted materially in revealing similarities between the anaphylactic and anaphylactoid phenomena. The histologic differences may be regarded as representing different degrees of the same phenomenon, and if the analysis is carried far enough, it may be said that the underlying cause is the same. For instance, colloidal aggregation on cell surfaces, which is suggested from the flocculations, emboli, etc., would, according to Höber and Burridge, mediate stimulation; and, the lack of it, no change or depression. Therefore, the changes in functional activity that occur would be accounted for. The aggregation is, of course, intimately connected with the state and reactivity of the agent and cell surface permeability indicated above, and also with changes in ionic equilibrium, surface tension, osmotic pressure and electrical potential of cells. This line of thought is tempting for a general theory. However, it is deemed unprofitable to push the argument too far as long as physical and colloidal chemists are not agreed as to the exact manner of operation or as to the methods of analysis (Svedberg) of many of the forces that would have to be considered in such a theory, and especially when applied under conditions of the living complex organism. For the present, it is safer to adhere to the facts. The evidences taken as a whole indicate that the basis of anaphylactic and anaphylactoid phenomena, collectively the allergic phenomena, is a disturbance in the physical and chemical (colloidal) mechanisms of the blood and tissues. The net result of such physical and chemical changes is the mediation of stimulation and depression resulting in alteration of physiologic functions, commonly recognized by symptoms, or "reactions," etc.

This gives the allergic phenomena a broad significance in biology, and, therefore, in pharmacology and therapeutics, since they assist in revealing the nature of cellular function and of drug action. There are reasons to believe that the pharmacologic actions of many agents are concerned essentially with such physical-chemical disturbances as occur in and are probably responsible for the entire group of allergic phenomena. A few illustrations of the operation of such changes in excised and intact organs will serve to emphasize the mutual relationship enjoyed by allergic and pharmacologic phenomena.

PHARMACOLOGIC ANALOGIES

Camphor, a circulatory stimulant under certain conditions, depresses or inhibits the normal cardiac muscle; but, if the heart is previously depressed with bile compounds (agents which lower surface tension) and then is treated with camphor, stimulation occurs. Xylene, soap, ether, and charcoal act similarly to camphor (Wieland). It restores to activity (stimulation) hearts that have been stopped by charcoal and chloroform (Fröhlich and Pollak). Again, muscarin inhibits and strophanthin stimulates the heart muscle, but treatment with camphor removes both the inhibition and stimulation by the respective drugs (Tschernewa and Riesser). This is not a chemical action of the camphor, but indicates purely physical changes taking place in the cardiac muscle, perhaps suppression of surface permeability. This may explain the variable therapeutic responses of the heart to this remedy. In the presence of an excess of calcium, muscarin stimulates instead of inhibiting the heart; calcium also prevents diastolic standstill from arsenic and quinin, and, in excess, alters the diastolic standstill of potassium and chloral to a systolic standstill (Zondek). This illustrates how the functional response to drugs can be altered by an alteration in ionic equilibrium and perhaps also by permeability. Ordinarily, epinephrin accelerates, and increases the systolic tendency of, the heart; but if the heart is first subjected to calcium deprivation, then epinephrin slows and relaxes the organ, showing that a sympathetic may be altered to a parasympathetic (vagus) action (E. P. Pick), just as muscarin (parasympathetic) action can be altered to the opposite action. Tanned red blood corpuscles (immersed in tannin) hemolyze very slowly with various hemolytic agents, and this appears to be due to precipitation with the formation of an impermeable skin on the cells, but the same effect is obtained by immersion of the cells into sucrose and certain narcotics. With the latter agents, the aggregation of the cell surface is not so apparent as with tannin, but may nevertheless be present ultramicroscopically.

In the same direction are the following effects on living structures previously treated with tannin; namely, prevention of strophanthin standstill of the frog's heart, and increased irritability of frog's nerves depressed by cocain (Handovsky and Masaki). Normally, the tone of the bronchi is not altered by epinephrin; but, if the bronchial musculature is previously excited, as in asthma, or by barium, pilocarpin or histamin, epinephrin causes relaxation, and therefore, quite independently of innervation or the nature of the muscular excitant. This illustrates how alteration in functional state alters the response of a mechanism and explains why epinephrin is beneficial in asthma, irrespective of the cause. Ordinarily, a rise of blood pressure occurs when epinephrin is injected intravenously; but if fluid extract of ergot or ergotoxin (which also raises the blood pressure) is injected

previously in adequate dosage, succeeding injections of epinephrin produce only a fall of pressure. Similar reversals of epinephrin action by ergot or ergotoxin can be obtained on excised vessels, and also in the excised virgin uterus (Clark and Broom). In this reversal it is assumed that the vasoconstrictor nerves are paralyzed by ergotoxin. However this may be, the phenomenon nevertheless illustrates an alteration in response of a mechanism (sympathetic endings) toward a drug (epinephrin) which ordinarily stimulates the same mechanism, by another drug (ergotoxin) which first of all stimulates it and then renders it unresponsive (paralysis). Marked sensitization of the sympathetic nerves to epinephrin can be demonstrated by preliminary injection of an ineffective dose of cocain (Fröhlich and Loewi) or of thyroid extract (Asher and Flack).

Many other illustrations could be given, but these few will serve to emphasize that alterations in functional activity (allergies) of cells are not limited merely to protein anaphylaxis. The functional responses to drugs can be altered similarly, that is, through the intervention of physical-chemical forces, and at will by a variety of agents, including drugs. As a matter of fact, such allergies are widespread in biology. A proper appreciation of all this, therefore, is of importance in understanding the nature of pharmacologic phenomena and an asset in therapeutics.

PRACTICAL CONSIDERATIONS

From what has been said, it is clear that physical and chemical changes in the blood and tissues may always be expected when agents reach the blood stream in effective concentration, and especially when they are introduced directly into it. This is due, firstly, to the rôle of the universal phenomenon of adsorption, and, secondly, to changes in functional activity of the cells resulting from the contact. Hence, corpuscles, plasma and endothelium of the vessels will be affected immediately, and then the tissues and organs, among which the heart and lungs come first. The final result will depend on the influences of several factors, such as the nature of the agent, its dosage or concentration, the state of the physiologic functions, the operation of defensive mechanisms (absorption, excretion, destruction, etc.), and perhaps other factors. The outcome may be no demonstrable change, stimulation or depression and the therapeutic result, no change, beneficial or detrimental. All of this bears on the therapeutic employment of the allergic phenomena, and on intravenous medication.

Therapeutic Use.—Several of the agents mentioned under "anaphylactoid phenomena" in this paper are employed empirically for the alleviation, if not cure, of disease conditions whose symptoms they reproduce wholly or partly (synergistic action). This is followed by the alleviation or suppression of the symptoms subjectively and objectively (antagonism). Curiously, diseases with unknown etiology (rheumatic fever, arthritides of various kinds, etc.), and symptoms of unknown origin, especially pain, fever, and chronic inflammatory processes, appear to respond most favorably. Apparently the physical and chemical changes resulting in the blood and tissues from the administration of these agents are responsible for the benefits derived from widespread alterations in cellular function, including increase in capillary permeability, which would aid in removing edemas and chronic inflammations, and facilitate exchange of metabolites, increase the metabolism, etc. On the other hand, the results may be alarming and even result fatally. This might be expected from the flocculations, agglutinations, embolism and thrombosis, provided these are sufficiently marked, extensive and present in important organs (lungs, brain, heart), resulting in sudden death, or asphyxiation and death from the capillary stasis and blockage. Protein anaphylaxis is not made use of therapeutically; it is usually not fatal, but is disturbing in connection with injections of serums, antitoxin, etc., for the same reasons as the disturbances from other agents. Hence, an understanding of the nature and probable basis of the allergic phenomena should aid in regulating the nonspecific, foreign protein, etc., therapy.

Intravenous Medication.—Many of the agents that are mentioned in this paper are advocated to be used intravenously in patients in place of the oral and other safer methods of administration. This includes such common agents as hexamethylenamin, iodid and salicylate, which cause definite chemical and physical changes in the blood of animals (Hanzlik, De Eds and Tainter). These changes, taken together with the symptomatic and histologic changes from the same agents, indicate that they are disturbing and injurious to important functions and tissues when administered intravenously (Hanzlik and Karsner). There is no justification for the intravenous administration of such agents as hexamethylenamin, sodium iodid and sodium salicylate, because their ordinary systemic effects are readily and promptly obtained from oral administration. On the contrary, other and more detrimental effects may be obtained from intravenous administration.

An agent injected intravenously may be temporarily beneficial to one function, but detrimental to others and to the organism as a whole. This is illustrated by the intravenous use of acacia in shock and similar conditions. By the use of acacia, a single function may be improved; that is, the level of blood pressure may be raised and maintained at a high level for a time. However, the net result for the organism is no better, and is usually worse, than by other methods of treatment, injurious effects in and greater mortality of animals than from other solutions having been demonstrated (Henderson and Haggard), and also severe reactions and death in patients (Lee). Even isotonic sodium chlorid solution is not physiologic, but is not as injurious as some other agents and solutions.

The intravenous effects of agents cannot be predicted from their physical and chemical properties, and from their physiologic effects when given by mouth. For instance, agar, which is chemically inert and harmless when given by mouth, produces violent reactions and even death when injected intravenously in minute doses. From all this it follows that the indiscriminate and careless use of drugs by intravenous injection is irrational, unscientific and dangerous. In practice, this would not apply to those agents which have been shown experimentally to be harmless, and with those such as the arsphenamins and strophanthin, for which intravenous injections are relatively safe and other methods of administration, unsafe or unsuitable. However, even with the arsphenamins (Voegtlin et al; Freud) and strophanthin (Meyer and Freud), modifications of, or use of adjuvants with, the compounds are being sought and tried by intramuscular and hypodermic administration, and successes are reported, the object being to obviate the reactions and injuries from their intravenous administration.

CONCLUSIONS

1. The anaphylactic and anaphylactoid phenomena, collectively the allergic phenomena, appear to rest on a common basis, namely, on disturbances in the physical and chemical (colloidal) mechanisms of the blood and tissues.

2. This is indicated from the evidences taken as a whole, among which are the nearly identical symptomatic, blood and tissue changes in different species described in the literature.

3. Exceptions to this are the period of incubation, and the hyperexcitability of isolated smooth muscle that appear to be peculiar to protein anaphylaxis, and some discrepancies in the histologic changes; but these differences may be explained and reconciled on a physical basis.

4. However, in view of sundry difficulties, the exact explanation of the physical-chemical disturbances is not yet at hand, though it is believed that such disturbances mediate cellular stimulation and depression, and hence alteration in normal functions, commonly recognized as symptoms or "reactions," etc.

5. This gives the allergic phenomena a broad significance in biology, and therefore, in pharmacology and therapeutics, with which they enjoy a mutual relationship.

6. The analysis of the phenomena indicates something of the nature and limitations of nonspecific, foreign protein, etc., therapy and emphasizes again the dangers of intravenous medication.

SOME SUGGESTED REFORMS IN THE MEDICAL CURRICULUM *

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In recent years it has become the custom to separate the medical curriculum into two distinct parts: the preclinical, or laboratory, and the clinical years. This means that during the early part of the student's training—through the third and fourth years, if he takes the premedical course also—his entire time is devoted to the purely scientific branches. And it means also that during those four years he never comes into contact with a sick person, and naturally he is not impressed with the fact that his ultimate aim is to recognize disease in the living, and to apply his art in its relief and cure. The time spent in the purely scientific branches is both necessary and essential; a profound knowledge of biology, chemistry, anatomy, physiology and pathology all contribute to making the well rounded physician. But are we not building too much foundation for the structure that is to be put on it, or, to put it more accurately, are we not losing sight of the proper balance, when we devote more time to the preclinical than to the clinical years? Are we not teaching our students, unconsciously at least, that research work and laboratory investigation are more important than the healing of the sick?

This tendency is widely recognized. Dr. W. J. Mayo, in an address before the Physicians' and Surgeons' Club of Rochester, in December, 1919, after pointing out how, in the teaching of the late Professor Corydon L. Ford of the University of Michigan Medical School, the old system of clinical teaching and the new system of laboratory investigation were combined with surpassing results, added: "During my active experience in surgery, working with many different assistants, I have not always been impressed with their knowledge of anatomy, though they have all possessed a fair knowledge of pathology. At times it would seem that they were more familiar with minute pathology than with anatomy." Cushing, in his presidential address before the American College of Surgeons in 1922, summarized the situation in these words: "It is a curious commentary on our methods that, while we have come to emphasize the importance of teaching the preclinical sciences by practical laboratory exercises, so that the student may at least have some first-hand knowledge of the scientific method, and may learn to interpret and observe for himself, we have tended, if not to abandon, at least to postpone to the end of the course these very methods so far as the clinic is concerned." The Committee on Curriculum of the American Medical Association, under the chairmanship of Dr. Hugh Cabot, has also called attention to this tendency: "There is some reason to believe that the arrangement of the curriculum which concentrates the preclinical subjects in the early part of the courses has tended to create in the minds of the students an amount of separation of the subjects from their clinical application which is undesirable. Though it is obvious that these subjects are fundamental, and form the basis of the study of medicine, it is of first class importance that their relation to the practice of medicine should at all times be kept before the student. There is distinct danger in the teaching of these subjects as exact and isolated sciences which may come to live in almost watertight compartments."

As I have already said, I have no wish to decry the importance of the purely scientific branches, but why cannot such training be given at the same time as some practical clinical work along the same line? Would it not be better to teach bacteriology and anatomy along with the practical application of these two fundamental branches? Will not your student be a better physician if there is established some liaison between the purely theoretical studies and the study of disease in the actual sick man? Could not the missing link be supplied by earlier contact with the patient? Take, for instance, the treatment of a staphylococcal or streptococcal infection of the hand as a basis for such a study. It would be easy to teach at the same time the anatomy of the hand, the relations of the tendon sheaths and bursae, the circulation and innervation, the pathology of the condition, the actual treatment, and the resulting disability from improper methods. The student who is proficient in anatomy, and may even be able to draw cross sections of the entire torso, frequently does not understand the structures which are approximated in the Bassini operation or any other procedure for the cure of the ordinary varieties of hernia, simply because of this lack of correlation. As the situation is at present, the clinical teachers are carrying the added burden of pointing out to the student the practical application of his preclinical education, and they are not always qualified to do it. The surgeon is usually a fair anatomist, the internist is usually a good physiologist, but how many of them have kept up their knowledge of embryology, for instance, and its rather important bearing on certain diseases and deformities? Under the present system, on the other hand, the preclinical teacher is not a practicing clinician and never has been, and in most instances he is unable to give to his students

* Chairman's address, read before the Section on Surgery, General and Abdominal, at the Seventy-Fifth Annual Session of the American Medical Association, Chicago, June, 1924.

the practical clinical application of the subjects he is teaching. With such a line of demarcation between his teachers, it is small wonder that the student finds himself bewildered and is inclined to regard the two divisions of his medical course as totally unrelated.

That is the situation, then, as it exists today. Our medical curriculum is sharply divided, our clinical and preclinical faculties are equally clear in their division of responsibility, and the student is certainly not at fault if he loses sight of the fact that the major portion of his life, unless he goes over entirely to research work, will be spent in dealing with the sick, who are an unknown quantity to him when he has half, or more than half, finished his course. Naturally there are certain very practical consequences, perhaps the most important of which is a drifting away from clinical methods, and an almost slavish dependence on laboratory methods on the part of the medical profession today.

NEGLECT OF CLINICAL METHODS

Having been trained at a time when most of our scientific armamentarium was in its infancy, I cannot refrain from just a passing word of reference to the diagnostic acumen of some of our older clinicians, and a wish that some of their clinical sense could have been handed down to the generations that have succeeded them. I refer in particular to some of the practitioners in the community of my residence, who had been trained in the French school, and who began their surgical apprenticeship—for surgery was a new science in those days—as general practitioners. The color of the patient's skin, the general and facial appearance, the position in bed, certain characteristic odors, especially of the perspiration, all had a meaning for them which they do not possess for most of us.

A characteristic illustration is the story told of Laënnec: how when a patient accidentally expectorated on his hat from the veranda above, he looked at the nummular sputum and simply remarked, "The poor fellow will be dead in a few weeks." Contrast this with an incident Cushing related in his recent address before the Annual Congress on Medical Education in Chicago. "A patient was admitted in the fall to one of our well known hospitals, noted for its spirit of investigation and the exactitude of its work. The only thing that appeared to be wrong with the man was that he had a fever of unknown origin. A variety of people, whose special duty it was, had made detailed examinations of the blood, urine, sputum, stools and cerebrospinal fluid: microscopic, chemical and bacteriologic. His thoracic and abdominal viscera had been thoroughly and expensively studied by the roentgenologist. His basal metabolism had been estimated and recorded; electrocardiograms had been taken; and specialists had been called in to exclude nose, throat, teeth, ears and eyes. All these things took time, and meanwhile the fever persisted. At this juncture a country practitioner who had enjoyed none of the present day laboratory advantages happened to visit the hospital, and as he passed the man's bed in the course of the morning rounds, he casually remarked, 'I am surprised to see that you still have an occasional case of typhoid fever in your neighborhood.'" The story may be somewhat overdrawn, but the moral is plain.

Our interns, as they come to us after completing their medical course, illustrate very well the weakness of our present system. They are familiar with all the instruments of precision that should be used as diagnostic and prognostic aids, and to confirm one's suspicions as to what is wrong with the patient. They are in many instances familiar also with laboratory microscopy, blood chemistry and the use of the electrocardiograph. But their clinical sense is usually underdeveloped or entirely lacking. I have recently observed young physicians in an outpatient clinic, and I have noted that the diagnosis of tuberculosis, for instance, is rarely made on the physical signs. A suggestive history is obtained, and the patient is sent to the roentgen-ray laboratory for a picture of his chest; if the report is positive, he has tuberculosis, if it is negative, he hasn't. If there is a suspicion of goiter, the basal metabolism reading does the rest. The anatomist, the pathologist and the bacteriologist are sort of superclinicians who are depended on to make microscopic or test-tube diagnoses. A positive Wassermann reaction is too often the only indication for treatment; the reaction is cared for, but the patient is ignored. The stethoscope has fallen into innocuous desuetude. The electrocardiograph is the only means of recognizing heart lesions, and without the laboratory there is no typhoid fever. Pain in the right iliac fossa calls for a leukocytic count, and a high count calls for an emergency appendectomy. The work of Fitz, Murphy and Oschsner has been lost sight of. It is true that a blood count is our most reliable rule for guidance at this time, and that most of us, not being Ochsners, need some such rule; but one feels strongly tempted to put his idea, unsafe though it be, into practice when teaching students these days, "Make your diagnosis of appendicitis, have a blood count made, operate, and then look at the blood count."

Again, while the interns who come to us fresh from the college may be thoroughly drilled in these laboratory methods and may be able to discourse learnedly on the theory of surgery of the upper abdomen, for instance, as assistants at the simplest operation they are frequently more hindrance than help, and many of them cannot even put on a comfortable bandage, let alone a neat-looking one, for the reason that they have had no practical experience in doing these things but have simply talked about them. It would certainly be better to teach our young men the surgery of the outpatient clinic, which is the sort they will need most and soonest, than to have them lectured by even the best of surgeons on the mysteries of abdominal disease.

THE DRIFT TOWARD SPECIALISM

A second consequence of our present method of education is the tendency to drift into narrow specialism. By this I do not mean those branches which have always been recognized as pure specialties, such as ophthalmology, otolaryngology and dermatology, but such others as surgery, obstetrics and gynecology, in which the line of division is very faintly drawn or does not exist at all. There is a tinge of sorrow in the fact that the good old general practitioner has disappeared from our midst. I am not saying that we would wish him back in his old incarnation, but certainly we have let the pendulum swing to the other extreme, and it is small wonder that the patient is bewildered and rather resentful as he tries self-diagnosis in an endeavor to decide which specialist he shall consult for his particular ailment. Medicine is too big a field now for one mind to grasp in its entirety, but a survey of the whole field is still a desideratum, and it must be acquired by the medical student during his college days. The best specialist in any line is the man who has begun his career as a general practitioner, for very often many of the symptoms referable to any given region of the

body have their origin elsewhere. Specialization should be an evolutionary process rather than a chosen career, and while it is not practical to omit the specialties entirely from the medical curriculum, certainly they should not be emphasized to the extent they are at present. That should be the function of the hospital years or of the graduate school.

This emphasis on laboratory methods, and this drift into the specialties is not an abstract affair; it results in most decided consequences to the patient and to the community. I need not point out that medical treatment is becoming for the individual patient a most expensive luxury, with the consultations and the laboratory tests needed for the diagnosis of the simplest disease, and that it is the great middle class which suffers. The rich man can pay and the poor man can go to the free clinics and public hospitals, but the average wage earner must either accept charity or do without the treatment he needs. Then, the scarcity and even lack of physicians in many of our rural communities can be traced to this very tendency. It is becoming increasingly difficult for the country doctor to practice without a great deal of expensive equipment, which in many cases is not practical for his use. Therefore he must refer his patient to the city, where the specialist is available, with all his laboratory facilities. This continued practice tends to direct all of those who can afford it to seek the city doctor, and the man in the country is soon left to treat only the poorer class of patients, or frank emergencies. If he is ambitious he will soon follow his disappearing clientele to the city, or perhaps by a rather large expenditure he will go to one of the graduate schools and study the essentials of laboratory and clinical microscopy, while some of his more unscrupulous confrères will remain at home and attempt to recoup their disappearing finances by sending their patients to the city doctor who will give them the highest percentage of profits, for fee splitting springs from many causes.

I have no desire to go on record as believing that this is the only cause of the scarcity of rural physicians, but it is certainly a contributing factor, as my own experience proves. Many times in recent years I have been asked by young men beginning practice how much equipment they need to do good work in a country town. When the subject has been threshed out they have usually decided to take their chances in the city, or to seek contract positions where they will be assured of a living wage without financial risk on their part. I know personally at least a dozen young men with every promise who have disappeared in some lumber or mining community. Colwell has pointed out that we have no scarcity of physicians in the United States, where we have one to every 726 inhabitants, as compared to one to every 1,000 in the European countries, but that the trouble lies in uneven distribution. The tendency is unquestionably for our young graduates to remain in the cities, and any system of education which does not distribute its products, and which tends, no matter for what reason, to crowding in some sections at the expense of others, needs revision.

THE REMEDY

So much, then, for our present system of education and its consequences. Now what are the remedies? It seems to me that in our earnest endeavor to supply better physicians we have progressed too rapidly; that it would be better to go back just a little and adopt some of the methods in vogue about fifteen years ago, when more thought and time were given to the actual study of disease in the living patient and in the necropsy room. We need a closer contact between the clinical and preclinical branches, which in my mind can only be accomplished by an earlier contact between student and patient, and a closer liaison between the clinical and the purely scientific teachers, so that the student may have the benefit of the application of his scientific training from the very beginning. As Cushing says, "I do not believe that students can begin to think in terms of the patient too early in their course, nor too early begin to interpret and record what they can see, hear and touch—perhaps even smell and taste—at the bedside."

To do this it would not be necessary to increase the teaching hours assigned to surgery, which, of course, is the particular branch I have in mind. The curriculum is full enough as it is. I am heartily in accord with the report of the Committee on Curriculum of this Association, which I have already quoted. It believes that "the amount of assigned, supervised teaching has become a fetish worshipped as such," and that a "sounder, and so to speak, rounder development of students will take place with a lesser amount of assigned teaching." On the other hand, I do not believe that we should go back to the old method of plunging the entering student directly into the complicated problems of the bedside. But there is a possible via media. I am not advancing this as the only solution, but I think that perhaps the inauguration of a summer semester might be feasible, when students might work as clinical clerks, especially in the outpatient departments. The development of the specialties might take place here, but that would not be the main aim, and the service should be a rotating one, so as to broaden the students and give them the necessary training in all branches. The application of their scientific training could be made in such clinics, and the study of disease conditions carried out from both sides. Then the emphasis would be where it belongs, on the patient, and not on the theory of disease or the instrument of diagnosis, and the "pathology of the living," in Moynihan's happy phrase, would once again assume its rightful preeminence in the science and art of surgery.

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Leechcraft in Ancient China.—A truly wonderful code regulating the machinery of government is a book which still exists under the title of "The Chou Ritual" (Chou li). It enables us to study most minutely Chinese civilization during the last eight and a half centuries of the Feudal Period, i. e., till 246 B. C. The Chou Ritual contains a detailed account of the state medical service, comprising five departments, under the control of the prime minister, or "officer of heaven." The first of these five was what we may perhaps term the ministry of health, presided over by a chief medical officer (i-shih) whose staff numbered thirty. His functions were to supervise medical practice and pharmacy throughout the state, and himself to treat the emperor and high officials. At the end of each year he put his medical officers through an examination as to their success or failure in treating their patients, and he adjusted their rank (and presumably also their pay) accordingly. Then there was a department, with a personnel of eight, charged with treating the maladies of the common people. Another separate medical department was that concerned with abscesses, ulcers and other septic conditions. The fourth department was composed of two medical officers charged with supervision of the imperial dietary. This elaborate state medical service existed during the Chou period from about 1100 to 300 B. C.—Yetts, W. P.: *Proc. Roy. Soc. Med.* **17**:2 (Jan.) 1924.

CINCHOPHEN POISONING

REPORT OF A CASE OF SEVERE ALLERGIC REACTION

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Cinchopen and neocinchophen are being extensively advertised as superior to the salicylates in the treatment of rheumatic fever. Of these, neocinchophen is becoming especially prominent in the recent literature.[1] The freedom from toxicity in the ordinary antirheumatic doses is being especially stressed.[2] Barbour, Lozinsky and Clements[3] are very enthusiastic about the use of neocinchophen as a substitute for salicylates in practically all conditions in which the latter are usually indicated. Others[4] report very favorable results. Since cinchophen and its close derivative neocinchophen have been lauded as nontoxic drugs in gout and arthritis,[5] it might be well to sound a note of warning against the indiscriminate use of both these substances, because a study of the literature, together with the case here reported, demonstrates that these drugs, especially the mother substance cinchophen, are not entirely free from serious toxic symptoms.

Cinchophen was introduced into this country under the proprietary name of atophan. Its derivative neocinchophen was introduced as novatophan. It might be well to point out the relationship between the two drugs.

Cinchophen is phenylcinchoninic acid. Neocinchophen is the ethyl ester of paramethylphenylcinchoninic acid. These substances are very different chemically from salicylic acid.

The toxic effect of cinchophen was called attention to by Schroeder,[6] who reported nine cases of his own of severe by-effects from the drug, and eight other cases reported to him by other physicians and his patients. In his experience, the drug induces irritation of the digestive tract as well as constitutional symptoms of generalized itching, eruption and edema of the skin, fever, headache, etc. Hanzlik and Scott[1] found that both cinchophen and neocinchophen show injurious effects on the kidneys, as evidenced by albumin, casts and white blood cells in the urine, but that the effect is greater with the former drug. They also found that the symptoms of salicylism, such as nausea, vomiting, dizziness and tinnitus, also accompany the use of these drugs. They conclude that cinchophen in large doses, such as are necessary in the treatment of rheumatic fever, shows injurious effects on the kidneys, and other undesirable by-effects similar to those obtained from the use of the salicylates.

Boots and Miller[1] report their results during the last three years in the treatment of twenty cases of acute rheumatic fever. They found that 75 per cent. of the cases treated with neocinchophen showed toxic effects of some sort or other. Evidence of renal irritation by the presence of albumin and casts are common. One normal subject developed urticaria, with albumin in the urine following administration of 2 gm. of the drug. In order to obtain the same therapeutic effect as with salicylates, larger dosage had to be administered. As a whole, however, the toxic symptoms were somewhat less severe than with the salicylates.

Chace, Myers and Killian[4] made a comparative study of the efficiency and toxicity of the three drugs. They find that the neocinchophen is practically inert in the stomach, producing little, if any, distressing intestinal disturbances. Its therapeutic efficiency is not less pronounced than that of cinchophen, and they consider this drug to be a very promising agent in the treatment of acute rheumatic fever.

Jokl[4] reported his experience with cinchophen and neocinchophen in the treatment of thirty-nine cases of acute and chronic polyarthritis. The results were generally favorable, and in no case could he demonstrate any by-effects on the kidneys, heart or other organs.

Schroeder[6] believes that the unfavorable toxic symptoms may be warded off by administering sodium bicarbonate along with the drug, and also by the use of large quantities of water. Klemperer,[7] on the other hand, does not prescribe sodium bicarbonate and does not think that it is at all necessary.

From the foregoing, it will be seen that there are a number of reports in the literature which demonstrate not infrequent toxic effects from cinchophen and its derivative. A rather severe case of cinchophen poisoning came under my observation in June, 1923.

I was called to see a man, aged 44, who was in a semicomatose condition and was thought to be in a dying state by members of his family. The history of the case is as follows:

About three or four years previous to the present illness, the patient was suffering from rheumatic pains in the knees and the insteps of both feet. His physician prescribed tablets of cinchophen, two 7½ grain (0.5 gm.) tablets to be taken five or six times daily. After a short course of this treatment, his condition improved and he became free from pain. Since then he has had several mild recurrences of pain, always relieved by taking a few cinchophen tablets.

March 1, 1923, he purchased a new bottle of cinchophen tablets from one of the drug stores. March 4, he developed a mild attack of pain in his knees and feet. Within ten minutes after taking two of these tablets, he felt a peculiar sensation all over his body. There was an itching and prickling sensation of the skin at first, soon followed by numbness and a feeling of complete paralysis. He fell to the floor and could not move. Just before he fell, everything seemed to be turning dark before his eyes. He did not lose consciousness. His body became covered with a cold clammy perspiration. There was a heaviness and pressure across the chest in the region of the heart, producing difficult breathing. A physician, who was immediately called, administered some stimulants, and in about half an hour the patient felt very much better. He promptly made a complete recovery. At that time he took no more tablets.

June 5, three months after his previous attack, he came home complaining of a recurrent pain in the legs. He again took two tablets for the relief of the pain. Immediatly

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2. Barbour and Lozinsky (Footnote 1).

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after swallowing the tablets he sat down at the supper table. Within five minutes after sitting down and while eating his supper he began experiencing the peculiar sensation coming over his body similar to that which he experienced in March. He had the itching and prickling sensation of the skin, followed by a general numbness of the body. He described the numbness as not unlike that which one feels at times after the injection of procain. A sinking spell overtook him, everything turned dark before his eyes, and he dropped to the floor in an absolutely helpless condition. He felt powerless to move a muscle, but he did not lose consciousness. He again experienced the same pressing and pulling sensation in the region of the heart, associated with very difficult breathing. He soon regained a little strength, and felt an inclination to move the bowels. He was assisted to the bathroom, where he had a very watery bowel movement. While being helped back to bed, he sank helpless to the floor. His skin became shiny, appeared swollen, and had a peculiar pinkish color. Droplets of cold perspiration appeared all over the skin. He was carried to bed, and his body was rubbed with alcohol.

I saw him about an hour after the onset of the attack. He was lying in bed with deep, labored breathing; the face, arms and chest were a bright pink; the skin was moist, the extremities were cold, the finger nails and lips were deeply cyanotic. He appeared to be semiconscious, occasionally answering in a very weak voice. His pulse at the radials was just barely perceptible, at times entirely imperceptible, and no heart sounds could at first be heard. The blood pressure by the auscultatory method gave very faint tones up to 75 mm. The diastolic pressure could not be made out. He was given aromatic spirit of ammonia, strong black coffee, and caffein sodiobenzoate hypodermically. Heat was applied externally. Within half an hour, the pulse became more perceptible and then gradually increased in intensity. About two hours after the onset, the blood pressure rose to 90 systolic and 50 diastolic, and then to 100/60, 108/65 and 115/70; about three hours after the onset it was 124 systolic and 78 diastolic. By this time the cyanosis of the nails and lips had disappeared. The heart sounds also gradually became more audible, and improved in quality. The pulse rate, which at first could not be elicited exactly, at no time seemed to be rapid. On the next day the patient was feeling as well as usual, pulse 76, blood pressure 130 systolic and 78 diastolic.

A careful physical examination on the following day gave normal findings throughout. Cardiac dulness was not enlarged, and the heart tones were of good quality. The blood pressure was 140 systolic and 78 diastolic. The urine examination of the first specimen voided following the attack showed a specific gravity of 1.016; it was cloudy, and strongly acid in reaction; there was a large amount (two plus) of albumin, no sugar, an occasional leukocyte, an occasional red blood cell, and a few hyaline and granular casts. There was a very heavy sediment of uric acid crystals, as well as amorphous urates. A later specimen of urine was straw colored; the specific gravity was 1.012; the reaction was acid; there was a very faint trace of albumin; there was an occasional leukocyte; no red blood cells or casts were seen.

About one week after the attack, I tried to determine whether the patient would manifest any hypersensitiveness to cinchophen by the skin tests. For these tests I used samples of the tablets that he had purchased, and at the same time performed skin tests with acetylsalicylic acid and sodium salicylate. All the reactions were negative. One has to consider the possibility of temporary desensitization immediately following the attack.

From the foregoing, it is obvious that cinchophen and probably its derivative not only occasionally produce toxic by-effects similar to those of the salicylates, but also may produce irritation of the kidneys and at times severe allergic reactions. In the case here reported, the urine showed albumin, erythrocytes, leukocytes and hyaline and granular casts following the ingestion of a single small dose of the drug. It should be noted that the urine contained also an abnormal amount of uric acid and urates. The hypersusceptibility to the drug occurred on two different occasions during an interval of about three months. Each attack was brought on by only two tablets. A rather striking feature is the fact that both these attacks came on after the purchase of a new bottle of the medicine. I tried to compare these tablets with other cinchophen tablets, and could discover no difference in appearance, odor or taste. I did not have them analyzed for any impurities, but the probability is that they were the usual product. The profound cardiac depression, the severe skin manifestations and the marked nervous phenomena appeared within from five to ten minutes after their ingestion. They were taken on an empty stomach on each of the two occasions, and this may explain the rapidity of the onset of the symptoms. The generalized edema of the skin, the marked erythema, the itching and prickling sensations and the profound shock suggest that the attacks were true allergic phenomena. The patient might have sensitized himself to the drug during the previous three or four years, when on several occasions he had taken the tablets in large doses. But similar reactions were reported by Schroeder [6] and by Boots and Miller,[1] the latter reporting urticaria and albuminuria in a healthy subject following the administration of only 2 gm. of the derivative neocinchophen.

SUMMARY

1. A case of severe cinchophen poisoning presented the characteristics of profound allergic shock.

2. Cinchophen is a renal irritant in many cases when administered in ordinary therapeutic doses.

3. Neocinchophen produces renal irritation and other by-effects, but in a lesser degree than either cinchophen or the salicylates.

4. In administering cinchophen or its derivative neocinchophen, one should keep in mind the possibility of toxic by-effects and should watch the urine especially for evidences of renal irritation.

309 Physicians and Surgeons Building.

SOME OBSERVATIONS, LARGELY PESSIMISTIC, ON THE EARLY DIAGNOSIS OF GASTRIC CANCER *

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In past years, much work has been done with a view to developing methods for the early diagnosis of cancer of the stomach, but it would seem fair to say that very little real progress has been made, in the sense of perfecting methods that give a diagnosis of these cases when the disease is actually in an early stage. No one would question that we make more accurate diagnoses, largely aided by the roentgen ray; but, unfortunately, the bulk of our cases of cancer of the stomach, when diagnosed, are too advanced for there to be any great hope of cure, and often they are too advanced for surgery to offer any real help in amelioration of symptoms. In passing over in a mental review my own hospital experience with patients having stomach disturbances productive of symptoms, two things impress me: (1) that most cases of cancer of the stomach are rather definitely diagnosable as such, at the time the patients enter the hospital, on the basis of the history and ordinary physical examination, and (2) that

* Read before the Association of American Physicians, Atlantic City, May 7, 1924.

extremely few cases of cancer of the stomach are unexpectedly revealed by roentgen-ray examination.

In 4,000 recent admissions to the medical wards of the Peter Bent Brigham Hospital there were seventeen patients diagnosed as having carcinoma of the stomach, including one of lymphosarcoma (a histologic diagnosis). A review of their records shows that for most of them the history and ordinary physical examination justified a quite definite diagnosis of carcinoma of the stomach. In other words, they were obviously sufferers from this disease at the time they were referred to the hospital. Of these seventeen patients, twelve certainly should be placed in this group because they gave a history of loss of weight, usually marked in amount, with definite gastric symptoms, and because physical examination revealed a palpable mass, usually in the stomach region, although in one case there was an enlarged nodular liver. In such cases the roentgen ray adds only an additional confirmatory factor. Of these twelve cases, the roentgenogram gave the appearance interpreted by the roentgenologist as cancer in ten, while in one, the roentgenogram failed to demonstrate a carcinoma of the cardiac end of the stomach, and in another it suggested ulcer rather than carcinoma.

Of the other five patients in this group, in four, although the evidence was not definite, there was little reasonable doubt of the diagnosis of malignancy of the stomach on the basis of history and physical examination. In one of these the evidence of history was very definite, but physical examination was only suggestive of a palpable mass. The roentgenogram, however, showed cancer of the fundus of the stomach. In another there was much loss of weight, pain, jaundice and an enlarged liver; the roentgenogram showed evidences of pyloric obstruction, but nothing to distinguish whether this was due to ulcer or cancer; later the liver became nodular. A second case was very similar to this except that the liver felt smooth, while the roentgenogram indicated cancer at the pylorus. In the fourth patient the history and simple clinical evidence pointed to cancer of the lower end of the esophagus, and the roentgenogram indicated the same, but necropsy showed that it was an annular cancer at the cardiac end of the stomach.

In only one patient of this group was the clinical evidence suggestive of ulcer rather than cancer. In this patient roentgen-ray examination suggested an ulcer of the posterior wall of the stomach without obstruction. Later an operation was necessitated for drainage of a localized abscess following perforation. A later operation showed a carcinomatous mass in the lesser curvature of the stomach, and a scar of a simple ulcer of the duodenum.

A review of these successive cases bears out fully the statement that cases of cancer of the stomach are rather definitely diagnosable as such at the time the patients enter the hospital, from a consideration of the history given, and the results of simple physical examintion.

One would think that, if patients giving a history of symptoms suggesting a gastric disturbance were quite regularly submitted to barium roentgen-ray study of their gastro-intestinal tracts, at least an occasional case would yield evidence, in roentgenographic changes, of the presence of cancer in its earlier stages. My own results in the latter respect have been most disappointing, and indicate that we are still very far from possessing methods capable of giving us the diagnosis of cancer of the stomach in its earlier stages.

With these thoughts in mind, I have reviewed the records of these 4,000 successive medical patients and picked out those, though not suggestive of cancer, whose diagnosis would indicate that a roentgen-ray examination of the gastro-intestinal tract after a barium meal probably had been made. These admissions cover the period during which careful roentgen-ray examinations were made in a large proportion of cases giving persistent gastric symptoms, even though the history strongly suggested merely a functional disturbance. I have found 110 cases of this type, with barium roentgen-ray examinations included among the methods used in their study.

Of these, fifty-seven on discharge had some diagnosis made indicating that no evidence was found in the patient's history or physical examination to justify a diagnosis of organic lesion of the stomach, duodenum or gallbladder. Such patients might be grouped together under the general term "gastric neurosis." The actual diagnosis is unimportant in the present consideration; the important fact is that roentgen-ray examination yielded no evidence in any of these fifty-seven cases of any organic lesion, and no finding was suggestive of cancer of the stomach.

In seventeen patients, after a similar study, a diagnosis, based on the evidence presented, was made of cholelithiasis or cholecystitis. In some of this group the diagnosis was qualified to indicate the impression of probability, rather than positiveness. In this group again, for our present consideration, the important point is that the roentgen-ray examination yielded no evidence of intrinsic pathologic change of stomach or duodenum, certainly nothing to suggest cancer.

In another group of thirty cases, a discharge diagnosis of ulcer either of stomach or duodenum was made. In these, the roentgenograms showed signs interpreted to mean ulcer rather than cancer. In six patients, on the basis of hemorrhage or other definite findings, a presumptive diagnosis of ulcer was made, even though the roentgenograms gave no evidence of either ulcer or cancer. We have subsequently heard from a considerable number of these ulcer, gallbladder and gastric neurosis patients and there is nothing to make us think that an unexpected cancer has developed into one giving definite symptoms and signs. A goodly number, too, have been operated on, and ulcer, cholecystitis, cholelithiasis or no organic lesion has been found. In one instance, cancer instead of ulcer was revealed at operation, but this case is included in the group of cancer.

In 110 patients of this group, eighty showed no intrinsic organic lesion of the stomach by roentgen-ray methods, while thirty showed the lesions of ulcer, more often in the duodenum than in the stomach.

These findings bear out the impression that few cases of cancer are unexpectedly revealed by roentgen-ray examination in patients whose full histories and systematic general physical examinations are recorded.

Obviously, this review of patients represents too few gastric cases to have any statistical value, but it is confirmatory of my general impressions, based on a considerable clinical experience of some twenty years of active hospital work. This impression is that the early diagnosis of cancer of the stomach, in the sense of recognizing it in the stage when it is small locally, and particularly before it has metastasized, is still almost an impossibility, using methods at present available. Furthermore, results of roentgen-ray examination of the stomach in cases whose general study points to a functional gastric disturbance hardly justify the

examinations from the point of view of the recognition of unexpected cancer; their value lies in their positive usefulness in the recognition of ulcer and their help in the diagnosis of gallbladder disease; in these the value is great enough to fully justify the procedure, but the procedure does not lead to finding unexpected cancers of the stomach.

Peter Bent Brigham Hospital.

TENDON REFLEXES IN MYXEDEMA: A VALUABLE AID IN DIAGNOSIS *

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Sir William Gull,[1] in 1873, called attention to a disease with a distinctive group of symptoms which later became known as myxedema, and since then physicians' interest in this disease has steadily increased. Myxedema, according to Boothby's [2] definition, is "a constitutional disease, occurring in adults, due to decrease or absence of the secretion (thyroxin) of the thyroid gland as a result of its atrophy or removal, characterized by a markedly decreased basal metabolic rate, a myxedematous condition of the tissues, a slowed, impaired mental condition, a typical facial expression, and other secondary manifestations."

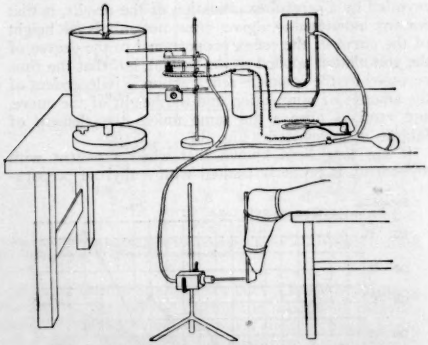

Fig. 1.—Apparatus for recording the tendon reflexes.

Since the time of Gull, each year has brought forth an ever increasing amount of literature concerning this disease, especially about the diagnostic features. Even now, however, it is surprising how frequently myxedema is unrecognized, and the patient allowed to go from place to place in search of help, in many instances treated for such conditions as "anemia" or "nephritis." Sturgis,[3] in a discussion of myxedema, says that ten of his patients had been examined elsewhere before they consulted him, and in only one had the real condition been recognized. This fact may possibly be explained by the relative infrequency with which the average practitioner encounters this disease. If the physician in his routine examination of patients could have his attention directed to myxedema by one quite definite sign, he would then be led to look for the other characteristics of the disease, and in this way establish a diagnosis. In myxedema there are at least two very definite, outstanding features, either one of which should suggest the disease to the physician: the patient's characteristic edematous appearance with rather unusual distribution of the edema, and the slowness of movement of the tendon reflexes. It is my purpose here to direct attention to the latter condition, the slowness of movement in all the tendon reflexes.

The movement is so slow that it can be easily recognized without the aid of mechanical devices, and it is almost pathognomonic. The slowness of the movement in the reflex has reference to the interval of time of a

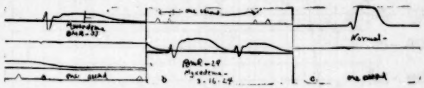

Fig. 2.—Graphic records of the Achilles tendon reflex in two cases of myxedema (*a* and *b*), in which the basal metabolic rates were — 33 and — 29, respectively. A curve of a normal Achilles reflex (*c*) is given also as a contrast.

complete response in a patient, as compared with the time of the tendon response of a normal person. In other words, it is the time required for the muscular contraction and relaxation after the tendon has been stimulated. In patients with myxedema, this quality of the reflex can be best observed in the Achilles tendon, the biceps or the supinator longus tendon. The clinician, in order to satisfy himself as to the presence or absence of this condition, needs only to use his percussion hammer.

The slow reflexes in myxedema are in keeping with all the other vital processes in this disease. According to Plummer,[4] "thyroxin (the active principle of the thyroid gland) is a catalytic agent hastening the rate of formation of a quantum of potential energy available for transformation on excitation of the cells." The amount of thyroxin, therefore, determines the rate

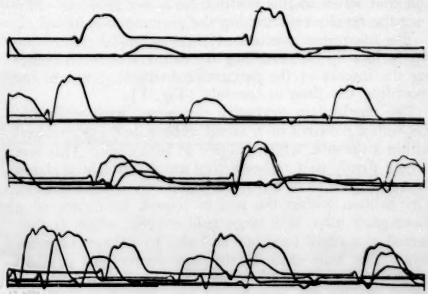

Fig. 3.—Curves of a series of tendon responses in a patient having a normal rate, showing that the time occupied by the response remains practically the same, irrespective of the degree of stimulation.

of cell activity or the speed of the vital processes if the necessary stimulus is present. In myxedema there is a deficiency or a total absence of thyroxin in the tissues, and therefore the rate of energy transforma-

* From the Division of Medicine, Mayo Clinic.

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tion is greatly reduced. All the vital processes, while seeming to act normally, are greatly reduced in speed. This is best illustrated in the myxedematous patient by his rate of cerebration and speech, for he thinks and talks very slowly, but his deductions are probably as logical as ever. The patient's reaction to every form of stimulation, mental and physical, is greatly retarded,

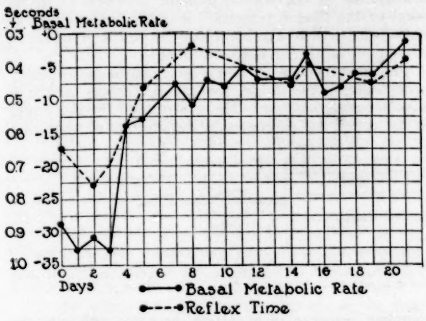

Fig. 4.—Curves showing parallel changes in the reflex time and the basal metabolic rate during treatment.

and the slowness of his reflexes is in harmony with this general picture. For a number of years this condition of the reflexes in myxedema has been recognized at the Mayo Clinic, but until recently no attempt has been made to record it graphically.

In constructing the apparatus used in this study, every effort has been made to have every part as light and delicate as possible, and yet sufficiently rigid to prevent the results being influenced by faulty mechanical devices. This apparatus may be used for any of the tendon reflexes, but for these experiments it has been adjusted for the Achilles jerks. The advantages of using the Achilles reflexes are that the patient can be very comfortable kneeling on a well padded chair, and that when in this position he is not likely to influence the results by watching the percussion hammer.

The apparatus consists of three essential parts: one part primarily for recording the reflex, one for registering the impact of the percussion hammer, and one for recording the time in seconds (Fig. 1).

The mechanism primarily concerned with recording the reflex consists of a small rubber balloon enclosed within a tin box, which is open at both ends. This box is held firmly to a rather heavy metal stand by a clamp that permits it to be adjusted easily to any desired level. The balloon within the box is joined, by means of a short glass tube, to a large rubber tube, which is connected to a small tambour and also to a water manometer. The tube close to the manometer has attached to it a rubber bulb taken from a blood pressure cuff, which enables the operator to have the same pressure in the apparatus for each experiment, and also a petcock, which serves to disconnect the manometer when the apparatus is properly adjusted. The tambour elevates and lowers a very light wooden marker, to which it is affixed by a bit of sealing wax.

The attachment, to be fastened to the patient's bare foot, is made of very light material, weighing 57 gm. It consists of a small wooden strip, 35 cm. long, held to the foot by small straps, and contains at the end, which projects from the toe, a small but stout wire, which has a hinge action with it. At the other end of the wire is a small cork, which comes in contact with the balloon and in this way serves to transmit the movement of the patient's foot to it. The impact of the percussion hammer is registered by means of an electromagnet. The circuit to the electromagnet is closed by two very thin metal strips attached to an ordinary rubber percussion hammer, as shown in Figure 1. Time is recorded in seconds on the drum by means of a clock attachment.

An examination of the graphic records made by this apparatus reveals several facts worthy of consideration (Fig. 2). First, the seconds, as marked off, occupy such a short space on the tracings that such phases of a reflex as the latent period, which is the time elapsing between the stimulation and the beginning of the response, cannot be studied unless they vary markedly from the normal, which is about 0.05 second. Again, it should be observed that the results obtained in cases of myxedema are so different from those in normal cases that the contrast should be noticed by the unaided eye. At the beginning of each curve there is an inverted loop dipping below the base line, which is caused by the impact of the percussion hammer on the tendon, and it varies in size with the severity of the impact. In all the tracings made from patients with myxedema, this inverted loop is greatly exaggerated, testifying to the fact that in patients with myxedema a greater stimulation is necessary than in normal persons. Still another fact, applying to tendon reflexes in general, which is revealed by a careful examination of the results, is that for any individual at a given time, not only is the height of the curve of the reflex proportional to the degree of the stimulation applied to the tendon, but that the time occupied by the complete reflex action is independent of the amount of stimulation and the height of the curve, and remains always the same unless the element of fatigue is introduced (Fig. 3).

It has long been known that when a patient with myxedema is properly treated with a thyroid prepara-

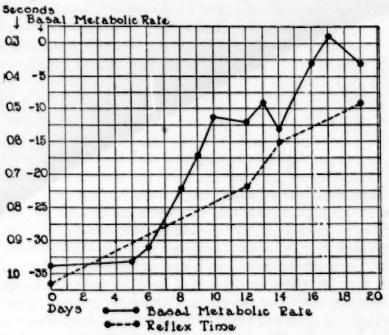

Fig. 5.—Curves showing changes in the tendon reflex time and the basal metabolic rate during treatment.

tion, his remarkable transformation is as much mental or psychic as physical. His slowness of speech and thought, his mental depression, weariness, irritability, indifference and apathy are replaced by a normal quickness of thought and response, cheerfulness and optimism. Once more he becomes interested in things about him, and shows in his every action that he is glad he is alive. The physical changes are not less striking

than the mental, and it was thought, therefore, that the tendon reflexes might change in a like manner and be an index to the patient's improvement somewhat similar to the index now obtained by determination of the basal metabolism.

Four patients, who exhibited in every way characteristics of myxedema, were studied, and their Achilles reflexes recorded graphically throughout their treatment. The results obtained were plotted in curves (Figs. 4, 5, 6 and 7), from which several interesting deductions were made. The curve of the reflex and the curve of the basal metabolic rates are strikingly parallel. When finally the basal metabolic rate is normal, the reflex likewise is normal, or as nearly so as can be judged by what is now known of the limits of a normal tendon reflex. It is obvious, however, that a definite conclusion as to the relation of the basal metabolic rate and the reflexes cannot be drawn from four cases. The fact that they seem to be parallel all during the period of recovery may be a coincidence. Observations must be made at more frequent intervals and on more patients before a definite conclusion can be reached.

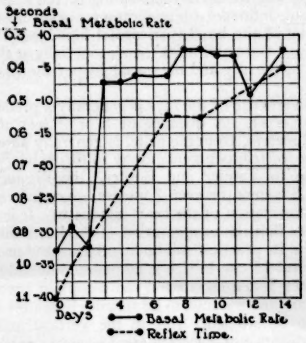

Fig. 6.—Curves showing parallel changes in the tendon reflex time and the basal metabolic rate during treatment.

A more careful study of the curves made by charting the time of the reflexes during the process of recovery shows no point at which there is a sudden change in the reflex time. To the internist, therefore, who is relying on his percussion hammer alone for his information, the time of the reflexes of a person who is recovering from myxedema would naturally fall into three groups: (1) those that are decidedly slow, as in typical myxedema; (2) those in which the time is sufficiently slow to make one suspicious of myxedema, and (3) those that seem within the limits of normal. Probably the greatest transition in the reflexes, as the result of treatment, occurs just after the disappearance of the so-called edema.

From the standpoint of diagnosis, however, it is more important to know at what point in the insidious course of the development of myxedema the reflexes would be slow enough to arouse suspicion. It is probable that they undergo a gradual transition in the development of the disease just as in the process of recovery. The stage at which the reflexes would attract the internist's attention would probably be during, or just after, the development of the edema. According to Plummer, "the edema of myxedema develops at, or at least becomes recognizable when the basal metabolism drops from 15 to 17 per cent. below the average normal" (Fig. 8).

Tracings were made of the tendon reflexes in normal persons, and compared with the tracings obtained in conditions associated with low basal metabolic rates but not definitely related to the thyroid gland, such as pituitary tumors with low rates, an unclassified group

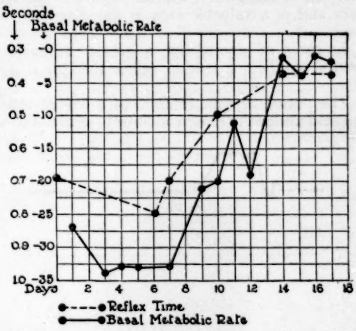

Fig. 7.—Curves showing parallel changes in the tendon reflex time and the basal metabolic rate during treatment.

with low rates, and the so-called anorexia nervosa. The latter condition is a state of extreme emaciation, apparently due to a total loss of appetite, and its low rate is probably related to a starvation process. In this group there were five cases of quite typical pituitary tumors with rates varying from —12 to —28 per cent. The one patient diagnosed as having anorexia nervosa had a rate of — 36.

The results obtained show graphically, what has been observed for a number of years in the routine examination of these patients in the Section on Neurology of the Mayo Clinic, that myxedema is apparently the only condition in which the tendon reflexes are much slower than normal; that in all the other conditions associated with a low basal metabolic rate that were studied, the tendon reflexes are apparently unaffected and the results obtained in these seem to correspond in every way with those of a normal person (Fig. 9).

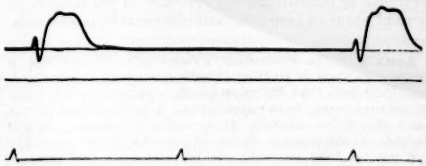

Fig. 8.—A record of a patient after being treated and having his basal metabolic rate brought up to — 2 (Figs. 2 *a* and 7). The result is practically within normal limits.

The abnormally slow movement of the tendon reflexes in myxedema should be a helpful sign in the diagnosis because of its simplicity, its clear-cut nature, and its apparent limitation to this one disease. When this sign is found, it should at least justify an investigation of the basal metabolism. Probably no other disease gives more brilliant results when properly treated than does myxedema, and the treatment is simple and accurate if guided by basal metabolic studies. The most impor-

tant point, therefore, to be brought before the internist is the fact that most patients with myxedema have had the disease for years before it is recognized.

CONCLUSIONS

1. In cases of myxedema, the tendon reflexes produce such slow movement of the parts affected that the quality can be recognized without the aid of mechanical devices and is a valuable sign in the diagnosis of the disease.

2. In cases of myxedema, a greater stimulation is necessary to elicit a tendon reflex than in a normal person.

3. The period or time interval of a tendon reflex of any person under the same conditions remains the same,

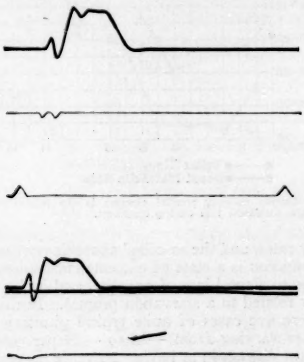

Fig. 9.—Graphic record of the Achilles tendon reflex in a case of pituitary tumor with a basal metabolic rate of — 25.

and seems independent of the amount of stimulation applied.

4. In all conditions associated with a low basal metabolic rate studied to date, with the exception of myxedema, the tendon reflexes seem to correspond in every way with those of a normal person.

5. When a patient with myxedema is treated and brought back to normal so that he loses the usual characteristics of this disease, his tendon reflexes also seem to return to normal, and the approach of the reflexes to normal seems to keep pace with the basal metabolic rate.

Auscultation in Pulmonary Tuberculosis.—I have had a large experience in treating chronic pulmonary tuberculosis, and I am sure that Paterson greatly exaggerates the harm which may result from auscultation. I can't remember any cases that it has harmed. It of course should not tire the patient. These patients should be auscultated at reasonable and not too long intervals. In hospital work this interval should not be longer than a month. In cases with an acute process, at least once a week. Auscultation is the greatest means at our command to know how the process in the lung is acting and if done quietly will not produce autoinoculations. Even if the patient is doing well he should have complete physical examinations at regular intervals. These intervals should be every two or three months at the outside and should be thorough so as to obtain full knowledge of the patient's condition. At this examination the throat, larynx, abdomen, and testes should always be examined. . . . There is practically no danger from the examinations if properly made.—Hugh M. Kinghorn: The Cure of Pulmonary Tuberculosis by Rest and Exercise, Boston, the Gorham Press, 1924.

SIZE OF THE NORMAL HEART

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The determination of the size of the normal heart is of the greatest importance to cardiologists. The normal size of this organ is so variable and depends so greatly on the sex, age, height and weight of the individual, that it is necessary that a basis of its normality be established, as the slightest modification of its size may reveal an underlying pathologic condition, for what may be the size of a normal heart in some individuals may in others determine a disease condition. The radiologists have tried to establish a basis of cardiac normality, but because of so many unavoidable sources of error they have been to a large extent unsuccessful.

The most patent errors in the delimitation of the heart area by means of the roentgen ray are: size and contour of the chest, position of the heart, exact centralization of the rays, accurate focusing, deformities of the chest, deformities of the spine, embedding of the heart in the diaphragm, influence of respiratory phases on the size and shape of the heart, pericardial blood vessels, pericardial fat (extra and infra), and, especially at the apex, changes of posture and the variability of the size of the sternum.

The divergence of the rays is generally a predominant factor of error. A distance of 6 or 7 feet, approximately 2 meters, from the plate, is generally accepted as sufficient for teleroentgenography in this country. But, according to Vaquez and Bordet,[1] the distance of 1 meter, 1.5 meters, or even 2 meters, gives too considerable a deformation of the heart silhouette. It is only at 2.5 meters that the exaggeration of the heart shadow is reduced to its practical minimum; that is, the projection of an object 15 cm. in size is augmented by only 4 or 5 mm. They also insist that in radioscopy of precision it is necessary for the tube to be accurately centered to the region to be studied. But in the vertical and small hearts a distance of 2 meters gives accurate results.

The method practiced by Vaquez and Bordet [1] for teleroentgenographing the heart is the best and most exact of any of the others recommended. The following is the procedure advocated by these authorities:

> We illuminate the radioscopic screen and by means of a diaphragm with a circular opening we so adjust it that the image of the heart is exactly contained in the interior of the luminous circle, the diameter of which should correspond exactly to the greatest diameter of the heart. We then fix the patient and the tube in their respective positions; we give the diaphragm a greater opening; we place a plate instead of the screen, or between the screen and the thorax and set the apparatus in action.

Any guesswork in the centralization of the tube will result in the distortion of the silhouette and in the exaggeration of the size of the heart.

The following conclusions, reached by Smith and Bloedorn [2] in their essay on the size of the normal heart, reflect the generally accepted opinions of radiolologists:

> The method employed [Bardeen's] does not furnish satisfactory standards by which to determine if the heart is abnormal in size. The failure not being due to method, but

1. Vaquez and Bordet: The Heart and the Aorta.
2. Smith, H. W., and Bloedorn, W. A.: U. S. Nav. M. Bull. 16: 219 (Feb.) 1922.

to great and unexplained variability in the organ studied, the difficulty will remain whatever means be used to ascertain the size of the individual heart under observation. Hence, any conclusions as to the relative size of a heart based on comparative dimensions, ratios, or relations to body landmarks are fallacious, and should be applied clinically with great reserve.

A century ago, Laënnec, Corvisart, Cruveilhier and Bouillaud seem to have encountered the same difficulties in determining the size of the heart from the anatomic and pathologic standpoint.

DIAMETERS OF THE HEART

The size of the transverse and longitudinal diameters of the heart silhouette is used by radiologists for determining its normality. The area of the heart silhouette, because of the frequently incorrect transverse and longitudinal diameters and the personal equation in the mapping out of the contour of the heart image, presents errors gross enough to render this method only one of doubtful utility. And the correlation of the volume of the heart with the size of the body, as advocated by Bardeen,[3] for many obvious reasons presents errors sufficient to render the method inaccurate in a large proportion of heart examinations.

Smith and Bloedorn,[2] in their examination of 500 midshipmen with normal hearts (by means of the roentgen ray) conclude:

It appears to be clear that while we can ascertain accurately the size and shape of any heart, we have no means whereby we may know what the size and shape of that particular heart ought, in the absence of disease, to be. In this respect our results correspond with those of other observers so strikingly that we must believe the heart in normal individuals to be so variable in size that it can rarely be possible to state from a single observation whether a given heart is or is not enlarged. Since this failure to evolve usable standards is not peculiar to the method employed, but is plainly due to unexplained variations in the organ observed, it seems impossible to limit the application of our findings to teleroentgenology. Thus, regardless of the method by which the actual size of the heart be estimated—whether by teleroentgenography, fluoroscopy, orthodiagraphy, electrocardiography, or manual percussion—and regardless of the degree of precision displayed by these several methods, we cannot escape the conclusion that, in view of the great variations in the size of the normal heart, any judgment as to the relative size of a given heart must be fallacious in the extreme.

Sir James Mackenzie[4] writes:

Indeed, I am doubtful if an x-ray examination of the heart has ever thrown the slightest light on a cardiac condition.

PERCUSSION

Percussion of the heart is generally acknowledged as an individual art, which in the hands of the most distinguished clinicians has yielded results more or less accurate.

William Duncan Reed[5] says: "The development of radiology has disclosed the limitation of percussion in determining the size and shape of the heart. In fact, some authorities go to the extreme of holding that percussion is valueless as a means of diagnosing the presence or absence of cardiac enlargement." He especially emphasizes that skilful examiners may differ in the demarcation of a particular cardiac border, but that each may, as a result of experience in practicing percussion according to his method, correctly determine the presence or absence of enlargement of the heart.

Danzer[6] says:

To percuss a heart accurately for diagnostic purposes requires a fine technic and is, at best, difficult, especially when slight or moderate enlargement exists. In fact the London school of cardiologists denies its possibility altogether even by the most expert. Personally I cannot accept this extreme viewpoint.

Barker[7] states that:

Especially in the obese, ordinary percussion, as every one knows, is most fallacious, and even in persons of normal weight I have seen great discrepancies among percussion results of supposedly accurate clinical observers. The methods of percussion in common use for the demonstration of the outline of the heart and great blood vessels certainly demand revision in the light of the x-ray findings.

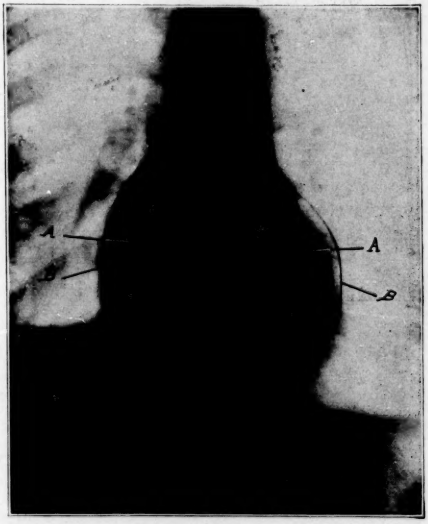

Fig. 1.—Normal heart: Line *A*, normal size of heart corresponding to clenched fist, mapped out by percussion; line *B*, roentgen-ray and percussion outlines corresponding; 6 foot plate.

Claytor and Merrill[8] observe that:

In almost all instances in which we felt satisfied with the efforts at percussion, the boundaries were found to be correct, but in some subjects it was absolutely impossible to outline the heart by percussion, and this, too, in cases in which there was no excess of adipose tissue, or other demonstrable condition, to interfere.

Neuhof[9] writes:

Careful and continued use and observation of the above special as well as the usual methods of percussion, checked by comparison with the unequivocal standards furnished by orthodiascopy and fluoroscopy, have convinced me that all methods of percussion are inaccurate and unreliable even for clinical purposes. These statements apply to percussion for superficial dulness as well as for flatness.

3. Bardeen, C. R.: Am. J. Roentgenol. **9**: 823 (Dec.) 1922.
4. Mackenzie, James: Oxford Medicine.
5. Reed, W. D.: The Heart in Modern Practice.
6. Danzer: Am. J. M. Sc. **157**: 513, 1917.
7. Barker, L. F.: Am. J. Roentgenol. **9**: 425 (July) 1922.
8. Claytor and Merrill: Am. J. M. Sc. **138**: 549, 1909.
9. Neuhof, Selian: The Heart.

A perusal of the literature shows that the great majority of writers on percussion of the heart hold these views on the fallacy and uselessness of this means of delimiting the cardiac borders. It is my intent to demonstrate that it is possible to map out the size, shape

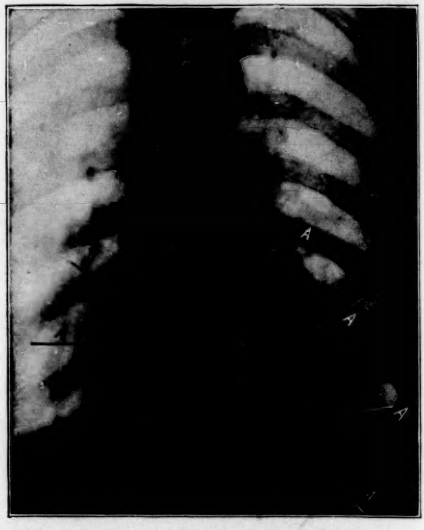

Fig. 2.—Normal heart: Line *A*, percussion outline.

and position of the heart precisely by percussion, and besides, that this method has the advantages of a greater degree of accuracy and a greater clinical value than are obtainable by means of the roentgen ray.

DROP PERCUSSION

The method I employed is Lerch's drop percussion.[10] This method of percussion is the easiest learned, the most mechanical, and eliminates all personal factors; it has the advantages also of the combination of three essentials: the sounds are heard, the resistance is felt, and the vibrations of the hammer may be seen. This method differs from others in principle. A drop is used instead of a stroke. A hammer and pleximeter are necessary to obtain good results. The method is mechanical, easy to learn, and gives uniform results in everybody's hands because a drop is passive and cannot be changed, and the sound produced is the same; no matter who allows the hammer to drop.

For many years, the accuracy of this method of percussion has been compared and tested on the cadaver and also with the cardiac silhouette of teleroentgenography. I have employed the following technic: The heart is first percussed, the borders determined and marked with fuse wire fastened to the skin with adhesive plaster, and the chest roentgenographed. The results from the two methods may then be compared on the same film.

The best proof of accuracy and of perfection of technic is to percuss the patient at different times resulting in the same size, shape and position of the heart. The elimination of all personal factors and individual differences of technic may be shown by the fact that different observers skilled in the method will have the same results. Once the drop method of percussion is mastered, precision may be acquired irrespective of the method employed; in fact, the tactile appreciation of the slightest resistance can be so developed that approximately accurate results may be had by means of light and gentle palpation.

It is obvious that movements of the heart due to its systole and diastole and to its changes of position and shape with respiration make extremely difficult an absolutely exact comparison of the percussion image with that of the roentgen rays. In fact, it is practically impossible to roentgenograph a heart in rapid succession and obtain similar outlines. The patient must be roentgenographed in the same posture in which he has been percussed. Another significant fact is that percussion is practiced on patients breathing normally and without exaggeration; but, when roentgenographed, the same person will invariably breathe deeply, thereby changing the shape and position of the heart. It may be that some of the errors attributed to percussion when compared with the roentgenogram may be due to this important factor.

INNER LINE OF DULNESS

Percussion gives two distinctive lines of dulness, one corresponding to the roentgen-ray silhouette of the heart and the other to a more pronounced and predominant

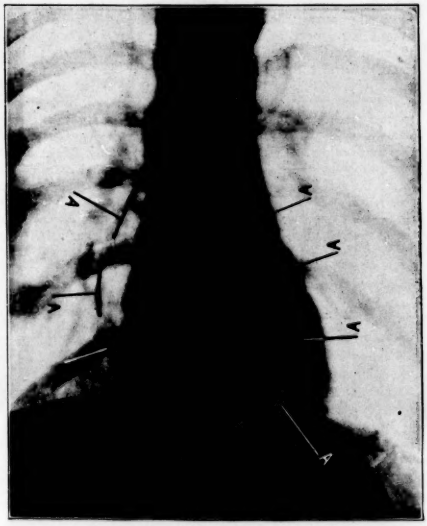

Fig. 3.—Dropped heart: Line *A*, percussion outline; the difference in position is due to respiration.

area of dulness, the size of which corresponds to the normal heart size given to us by the anatomists. The first cardiac percussion outline which corresponds to that of the roentgen ray, gives the same inaccuracies and is just as unreliable in its results as the roentgen-ray silhouette. The two outlines correspond fairly well, but

10. Lerch: Deutsch. Arch. f. klin. Med., December, 1912; Internat. Clin., Series 25, **4**, 1915; Arch. Diagnosis **9**: 1 (Jan.) 1916.

their clinical value is greatly inferior to the inner line of dulness. The line of dulness corresponding to the heart margin as mapped out by the roentgen ray represents the heart in diastole, together with its pericardial fat and blood vessels, etc., while the inner border as delimited by percussion corresponds to the heart itself in systole and stripped of its pericardium and its fat. In Figure 1 are illustrated these two lines of dulness as

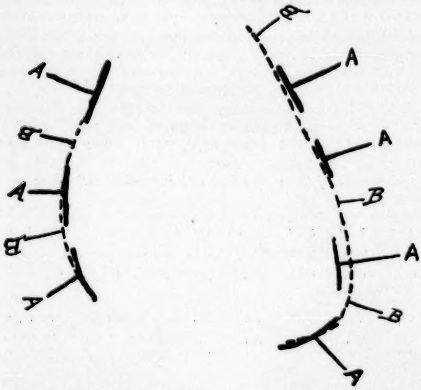

Fig. 4.—Percussion and roentgen-ray outlines of Figure 3, superposed by Dr. Granger: Line *A*, percussion outline; line *B*, roentgen-ray outline.

mapped out by percussion. This difference between the two margins of dulness is wider on the left heart border than on the right. It varies in size in different persons. There may be a difference between the two margins of dulness of from 1 to 1.5 cm. in subjects having a high diaphragm and in whom the heart lies obliquely. This margin diminishes as the heart assumes a more vertical posture, or in persons having a sagging diaphragm and manifesting a visceroptotic condition. This variation in the size of the cardiac silhouette is the chief difficulty in the accurate determination of the normal heart size in teleroentgenography.

The unreliability of teleroentgenographic measurements of the transverse diameter is pointed out by Smith,[11] who bases the following conclusion on roentgen-ray measurements made on 227 men for the purpose of securing statistics on the heart size of soldiers: "The individual measurements for the transverse diameter, in individuals with the same body weight, presented considerable variation, and emphasized the danger of basing an opinion on the determination of the diameter alone." According to Dietlen,[12] the apex is almost always felt one interspace higher than the apex of the silhouette obtained by orthodiagraphy, or, if the apex beat is under a rib, at least the width of one finger higher. His explanation is that the apex beat is felt in systole, while the silhouette shows the cardiac outline during diastole, and that while the heart changes slightly during the period of contraction and relaxation, such changes are greater at the apex.

Eyster and Meek[13] describe a method of making rapid roentgen-ray shadowgraphs of the human heart with a casette-changing mechanism allowing two exposures within the same cardiac cycle.

From their observations made on the normal heart, they state that:

> The decrease in size of the cardiac area during systole may involve any of the outlines, but does not usually involve all. The outline corresponding to the right auricle varies least in position, while the left ventricular outline, particularly toward the apex, is the margin which undergoes as a rule the greatest movement. The border of the right ventricle nearly always shows a descent at the base. . . . The part of the left ventricular border may likewise vary. Usually the maximum change is at or near the apex and decreases upward, but the reverse may be seen.

These observations explain the fact that the difference betwen the size of the teleroentgenographic and the anatomic heart is very much less in the vertical than the horizontal heart. The greatest change in the size and shape of the vertical heart due to its systole and diastole is downward, the apex being more to the right and down. As the heart increases its obliquity, this difference in its size is increased. This can be easily demonstrated either by percussion or with roentgen rays by pressing the lower abdomen, which causes the heart to rotate upward and to the left, and its transverse diameter to increase.

SIZE OF THE NORMAL HEART

Laënnec wrote: "I think according to my dissections that I am able to determine the natural proportions of the heart in the following manner, which, although

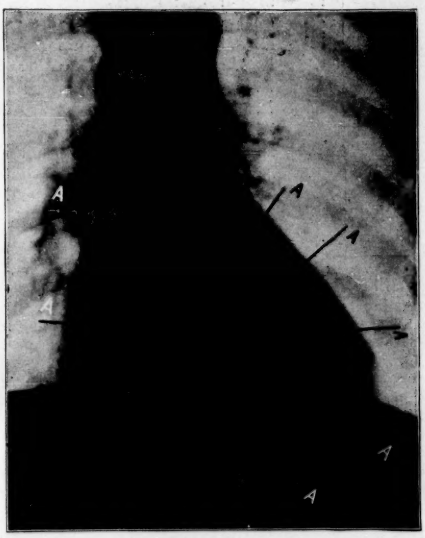

Fig. 5.—Slightly dilated heart: Line *A*, percussion outline.

approximate, is certainly of sufficient exactitude. The heart, including its auricles, has a volume slightly inferior, equal or very slightly superior to the volume of the fist." This approximate relationship of the size of the fist to that of the heart has been accepted by anatomists.

11. Smith, Bertnard: Teleroentgen Measurments of the Hearts of Normal Soldiers, Arch. Int. Med. **25**: 522 (May) 1920.
12. Dietlen: Deutsch. Arch. f. klin. Med. **88**: 55, 1907.
13. Eyster, J. A. E., and Meek, W. J.: Am. J. of Roentgenol. **7**: 471 (Oct.) 1920.

The size of the normal heart, as handed down to us by Bouillaud in 1841, and confirmed by other anatomists, is approximatively 12 cm. from the base to the apex, and 8.8 cm. at its broadest. Gray's dimensions are, from base to apex, 12 cm.; across at its broadest, 8.9 cm. Piersol's, from base to apex, from 12 to 15 cm., and at its greatest breadth, from 9 to 11 cm. Morris', from base to apex, from 12 to 15 cm., and at its broadest, 8.7 cm. Davis [14] says: "The heart is somewhat larger than the clenched first." Cunningham [15] says: "And it is roughly estimated as being about the same size as the clenched fist."

In Camp Beauregard, in 1917, I mapped out by percussion the borders of the heart of 257 normal soldiers with the object in view of determining the size of the normal heart. Two diameters were considered: the transverse, which corresponds to the greatest width of heart is the transverse, as it is the one used in comparison with the size of the fist. The longitudinal diameter is valuable so far as it corresponds with the transverse. The lengths of the two diameters are approximately the same. A greater length of the longitudinal is significant of a dropped heart, provided the transverse diameter is normal in size and the heart is normal.

The size of the hands varies in all persons. There is a close relationship between the stature of a person and the size of his hands. Persons who have wide thoraxes, short necks, wide costal angles, and wide but short sternums, have wide, thick hands and short fingers. Those who have elongated chests, with narrow costal angles and elongated narrow sternums have narrow, slender hands with long, slim fingers. In the first instance, the heart will lie in an oblique position, well supported by the diaphragm, with wide transverse

Size of the Transverse and Longitudinal Diameters of Normal Hearts of Two Hundred and Fifty-Seven Soldiers Percussed Standing

Height.....	5'2"		5'3"		5'4"		5'5"		5'6"		5'7"		5'8"		5'9"		5'10"		5'11"		6' plus		Total		
Weight in Pounds	T. D. in Cm.	L. D. in Cm.	T. D. in Cm.	L. D. in Cm.	T. D. in Cm.	L. D. in Cm.	T. D. in Cm.	L. D. in Cm.	T. D. in Cm.	L. D. in Cm.	T. D. in Cm.	L. D. in Cm.	T. D. in Cm.	L. D. in Cm.	T. D. in Cm.	L. D. in Cm.	T. D. in Cm.	L. D. in Cm.	T. D. in Cm.	L. D. in Cm.	T. D. in Cm.	L. D. in Cm.	T. D. in Cm.	L. D. in Cm.	
100 to 109....	....	....	....	....	7.8	8.00	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	Average
110 to 119....	....	....	....	....	....	....	....	....	8.5	8.5	8.5	8.00	....	....	....	....	....	....	....	....	....	....	8.5	8.25	Average
120 to 129....	8.1	8.9	8.00	8.5	7.5	7.5	7.5	7.5	8.75	8.56	9.00	9.00	....	....	....	....	....	....	....	....	....	....	7.5	7.5	Minimum
	8.55	9.2	8.8	8.9	8.75	8.56	9.00	9.00	9.7	8.5	10.0	10.0	....	....	....	....	....	....	....	....	....	....	8.8	8.8	Average
	8.5	9.5	9.00	9.5	9.7	8.5	10.0	10.0	....	....	....	....	....	....	....	....	....	....	....	....	....	....	10.0	10.0	Maximum
130 to 139....	8.00	8.00	8.00	8.00	7.5	7.5	7.5	8.5	8.00	8.00	....	....	7.5	7.4	Minimum
	8.5	8.5	8.8	8.9	8.96	9.10	9.07	9.12	9.0	9.4	....	....	9.03	9.13	Average
	9.5	9.5	9.00	10.0	10.0	10.5	10.0	10.0	10.5	11.4	....	....	10.5	11.4	Maximum
140 to 149....	9.00	9.00	8.4	9.5	7.8	7.4	8.2	8.2	8.00	8.00	....	....	7.8	7.4	Minimum
	9.15	9.00	9.00	9.3	8.63	8.77	8.80	9.22	9.07	9.06	....	....	8.9	9.08	Average
	9.3	9.00	9.00	10.0	10.0	10.0	10.0	10.0	10.0	10.0	....	....	10.0	10.0	Maximum
150 to 159....	....	....	8.00	8.00	8.00	8.5	8.2	8.5	8.00	8.00	....	....	8.00	8.00	Minimum
	....	....	8.74	8.52	9.07	9.16	9.18	9.21	9.00	9.14	....	....	9.08	9.12	Average
	....	....	10.5	10.5	10.0	10.5	10.0	10.0	10.5	10.5	....	....	10.5	10.5	Maximum
160 to 169....	....	....	9.00	8.7	8.00	9.5	9.00	9.00	8.3	8.3	....	....	8.3	8.3	Minimum
	....	....	9.5	9.1	8.96	9.00	9.46	9.36	9.05	9.00	....	....	9.12	9.16	Average
	....	....	10.0	9.5	9.3	9.00	10.0	10.0	10.0	10.0	....	....	10.0	10.0	Maximum
170 to 179....	....	....	....	....	9.00	9.00	9.00	9.00	....	....	8.5	9.00	8.5	9.00	Minimum
	....	....	....	....	9.5	9.33	9.25	9.25	9.5	10.0	8.33	9.18	9.22	9.23	Average
	....	....	....	....	10.0	10.0	9.5	9.5	....	....	9.5	9.5	10.0	10.0	Maximum
180 to 189....	....	....	....	....	....	....	....	....	....	....	9.00	9.00	9.00	9.00	Minimum
	....	....	....	....	....	....	....	....	9.00	9.00	10.2	10.0	10.0	9.89	Average
	....	....	....	....	....	....	....	....	....	....	....	....	10.2	10.0	Maximum
Total average.....																							9.0	9.27	

T. D., transverse diameter; L. D., longitudinal diameter. The transverse diameter in every case corresponded to the size of the clenched fist.

the heart, and the longitudinal, which begins at the intersection of the right contour of the heart and the origin of the great blood vessels and extends to the apex. The results of these researches are tabulated according to the height and weight of the individual. These dimensions of the transverse diameters of the heart at its broadest correspond with those given by the anatomists. Not only these 257 hearts, but many thousands examined by me during the last ten or more years, correspond invariably to the size of the fist of the individual when normal. This correlation of the clenched fist and the normal heart is constant and is the only practical determinant of its normality. The slightest variation in its size is recognized.

The transverse diameter of the heart corresponds to the linear measurement of a line beginning at the juncture of the inner side of the right clenched fist and the wrist, and ending at the middle joint of the fourth finger (Fig. 6). The most important diameter of the diameters, which, if normal, will correspond to the size of the clenched fist. In the other instance, the heart will be elongated and its transverse diameter narrow, but the longitudinal diameter will be greater than the transverse.

Again, the relationship of the heart at its broadest with the fist of the individual will be practically exact. Those who have a big fist have a big heart, and those who have a small fist have a small heart. The size of the heart as well as that of the hands is influenced by the same factor, physical work. Brezina and Lebzelter [16] of Vienna have observed that vocations involving manual labor affect the breadth and thickness of the hand, not its length, and that the two—dimensional enlargement of the hands of persons engaged in manual tasks calling for considerable muscular effort is in the nature of a functional hypertrophy involving the skin and contractile tissues.

14. Davis: Applied Anatomy.
15. Cunningham: Anatomy.

16. Brezina, E., and Lebzelter, V.: Arch. f. Hyg. **92**: 53, 1923; cited in The Dimensions of the Human Hand, editorial, J. A. M. A. **81**: 2119 (Dec. 22) 1923.

COMMENT

A study of the roentgenograms shows the close approximation between the size and shape of the percussed and teleroentgenographed heart. Figure 4 is a superposition of the percussed and the roentgenographed outlines of the heart in Figure 3. In Figure 3 is the dropped heart of a marked visceroptotic tall man. The percussion and the roentgen-ray figures practically coincide in shape and size. The difference in the position of the heart is due to respiratory changes. The interesting features in this case are the absence of pulsation at the apex, and a marked diffused pulsation below the ensiform cartilages and the fact that, because of the extreme vertical position of the heart, there is only one line of dulness that corresponds to the roentgen-ray outline. This is characteristic of a dropped heart, the difference between the two lines of dulness diminishing as the vertical position of the heart is increased. The longitudinal diameter of 11.7 cm., as compared with the transverse diameter of 9.5 cm., is significant of a markedly dropped heart. In the other roentgenograms, the size of the heart is exaggerated in both the percussion and the roentgen-ray outlines. This exaggeration is variable, for, while it is practically negligible in the vertical heart, it increases considerably as that organ's obliquity is intensified.

Fig. 6.—Linear measurement of the fist corresponding to the size of the transverse diameter of the normal heart.

CONCLUSIONS

1. Radiology has not furnished a basis for the determination of the normality of the heart's size.
2. Percussion is of greater value in delimiting the cardiac area.
3. The correlation of the normal sized heart and the fist of the individual is constant, and is the only practical determinator of the size of the normal heart.
4. The linear dimensions of the transverse diameter of the heart correspond to a line drawn from the juncture of the inner side of the right hand and the wrist, and ending at the middle joint of the fourth finger.
5. The determination of the size, shape and position of the heart is a dominant factor in the diagnosis of its pathologic conditions.

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MELANOMA

REPORT OF A CASE APPARENTLY PRIMARY IN THE JEJUNUM, THE PRESENTING SYMPTOMS RESULTING FROM METASTASIS IN THE HYPOPHYSIS CEREBRI

H. HOYT COX, M.D.
AND
LEROY H. SLOAN, M.D.
CHICAGO

Melanoma, melanosarcoma, or melanocarcinoma is a malignant tumor growth composed of pigmented cells. Ewing [1] inclines to the view that tumors of this type arise from a specific mesoblastic cell, the chromatophore, and possibly also from cells of the epithelial type which have been modified by pigment production. He writes: "Theoretical considerations favor the origin of all melanomas from the mesoblastic chromatophore, while the histology favors their origin from epithelial cells which have taken on pigmentary function. The established tumors exhibit carcinomatous or sarcomatous structures, or both."

The melanomas are usually primary in the skin as pigmented moles of congenital origin. They may remain quiescent for a long period, or they may become rather early malignant in character. They are also found primary in the choroid of the eye, the iris, the pigmented areas adjacent to the conjunctiva, the pia mater, the arachnoid, the rectum and, less frequently, in other organs.

Melanomas are found in animals, particularly in horses; in fact, melanomas of the rectum in horses were among the first tumors observed in veterinary surgery.

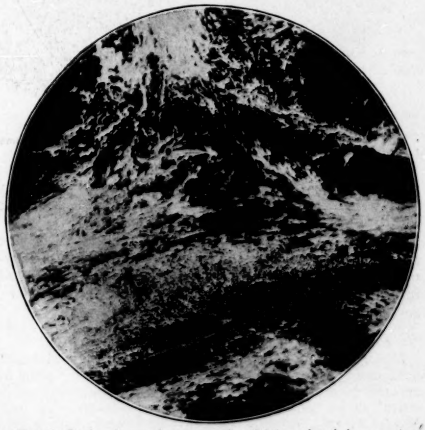

Fig. 1.—Section from primary growth, slightly reduced from a photomicrograph with a magnification of 70 diameters.

Vieborg of Copenhagen,[2] at the end of the eighteenth century, and Brugnone [2] in 1781 described the condition. The first mention of melanomas in man was made in 1806 by Laënnec.[3] In 1863, Ashton [4] observed the

1. Ewing: Neoplastic Diseases, 1919.
2. Haras de Chivasso, 1781.
3. Laënnec, quoted by Chalier and Bonnet (Footnote 6).
4. Ashton: Les maladies du rectum et de l'anus.

similiarity of melanomas of horses to the same condition found in man. Virchow,[5] in 1864, described a sarcomatous and carcinomatous form of melanoma. In 1869 he reported a case of rapidly malignant pigmented tumor of the rectum. Chalier and Bonnet[6] have compiled 100 cases of primary melanoma of the rectum. In their series they comment on the fact that the condition of generalized metastases in the intestinal canal was observed only three times, and then at necropsy. Ewing[1] reports a cecal melanoma in a child, aged 8. Wieting and Handi[7] report a supposed primary melanoma of the gallbladder. Vander Veer and Kellert[8] report a melanotic sarcoma of the middle section of the ileum. Duval[9] has reported a case of melanotic sarcoma apparently primary in the common bile duct. Libman,[10] in his article on sarcoma of the small intestine, calls attention to Treves' case of melanosarcoma of the ileum with infiltration of the

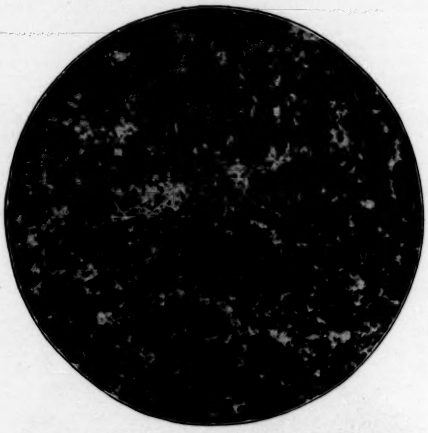

Fig. 2.—Section from primary growth, slightly reduced from a photomicrograph × 150.

inguinal glands. New and Hansel[11] report a primary melano-epithelioma of the palate, and discuss the literature.

The extreme rarity of primary melanoma of the gastro-intestinal tract warrants the report of the following case. The involvement of the pituitary may be of interest in connection with the supposed function of certain endocrine glands.

REPORT OF CASE

History.—L. F., a man, aged 54, had been in good health until early in January, 1923, when he began to complain of generalized aching, weakness, loss of ambition, reduction in sexual desire and power, and slight headache. He soon became languid, drowsy, inattentive and weak, and desired to be left alone. These symptoms progressed gradually, and became associated with severe frontal headache and uncontrollable yawning. At that time, a diagnosis of epidemic (lethargic) encephalitis or frontal lobe tumor was made, the former in view of a relatively recent, mild, mixed infection, the latter based on the headache, mental change, character change, drowsiness, lack of choked disk, absent localizing findings and yawning (a not infrequent accompaniment of frontal tumors although it is associated with tumors elsewhere and, of course, with epidemic encephalitis). However, by the latter part of April the patient developed intense drowsiness, nonprojectile vomiting, severe, deep seated, frontal, headache, buzzing in the ears, prostration, polydipsia, polyuria and diplopia. At that time, there was noted a peculiar branny desquamation of the skin, and a pronounced failure in the growth of hair. The headache increased in severity and was associated with vomiting, which came on shortly after the ingestion of food.

Examination.—June 22, somewhat more than six months after the initial symptoms, on the basis of the symptomatology presented above, Dr. Lewis Pollock made a diagnosis of pituitary tumor. Then, there was also present a paretic, right external oblique muscle, the right pupil was larger than the left; the left knee jerk was absent, and there was a positive left Babinski reflex and a suggestion of an hemianopia. Spinal puncture was done shortly. The fluid was under increased pressure; tests showed a slightly increased amount of globulin; there was a normal cell count, with a negative Wassermann reaction. Following this puncture, the patient improved rapidly. The headache disappeared, drowsiness became less, and vomiting stopped; there was less frequent urination, and the total quantity was decreased. This improvement was temporary.

Further hospital study revealed the following in addition to the findings noted above: no hemianopia; eyegrounds normal; abdominal and cremasteric reflexes, normal; normal sellar shadow; no suprasellar calcification; blood count, normal; the examination of the urine was reported negative for pathologic products (it is unfortunate that no test for pigment was made). The blood pressure was: systolic, 130; diastolic, 85; the left lower lung showed a rounded shadow about 4 cm. in diameter; a gastro-intestinal roentgen-ray examination was negative, except for gastric retention and the grouping of the intestines in the midline as if such a position were caused by adhesions. A cough productive of bloody sputum developed; the vomiting continued and was now of the projectile type; the patient refused nourishment, lost weight rapidly, showed ascites and pleural effusion, became maniacal and then stuporous, and shortly afterward died.

Necropsy.—The organs were brought *en masse* to the University of Chicago and were thoroughly examined there by H. Gideon Wells. The main findings, indicated by the anatomic diagnosis, were: malignant melanoma, apparently arising in the upper part of the jejunum with infiltration of the adjacent lymphatics and mesenteric lymph nodes; extensive secondary involvement of the liver, gastric and intestinal mucosa, pleura, peribronchial lymph nodes, heart muscle, brain and the left lung; tumor metastases in the posterior lobe of the hypophysis and the infundibulum, and in the pleura, peritoneum, vesical mucosa, dura mater, pericardium and the skull; slight infiltration of pancreas, peripancreatic and hepatic lymph nodes; occasional metastases in both kidneys and one subcutaneous metastasis; bilateral hypostatic pulmonary edema; moderate ascites and hydrothorax; Meckel's diverticulum; a slight degree of senile sclerosis of the aorta; a cyst in the left kidney.

The external surface of the body was examined carefully for a possible primary growth, but nothing of the sort could be found. There was a slightly raised pigmented mole in the right posterior scapular region, light brown, and about 7 mm. in diameter. Microscopically, this was found to be a simple slightly pigmented mole with no evidence of malignant transformation. Both eyes were removed, but careful examination revealed no indications of any abnormality, and certainly no melanotic tumor was present in either. Only one minute, subcutaneous metastatic nodule was found, that being beneath the skin of the left thigh.

What seemed to be the primary growth was located in the jejunum. This, the most extensive tumor growth, involved a loop at a point beginning about 30 cm. below the pyloric orifice, where the jejunum showed an extensive diffuse infiltration of

5. Virchow: Pathologie des tumeurs.
6. Chalier and Bonnet: Rev. de chir. **46**: 47, 1912.
7. Wieting and Handi, quoted by Ewing (Footnote 1).
8. Vander Veer, E. A., and Kellert, E.: New York State J. Med. **17**: 335 (July) 1917.
9. Duval: Montreal M. J. **37**: 270, 1908.
10. Libman: American J. M. Sc. **120**, 1900.
11. New, G. B., and Hansel, F. K.: Melano-Epithelioma of the Palate, J. A. M. A. **77**: 19 (July 2) 1921.

the serosa with pigmented tissue for a distance of approximately 20 cm. There was no obstruction to the bowel, although the bowel wall was diffusely thickened by tumor tissue up to 1 cm. thick. This lack of obstruction has been commented on as being rather characteristic of sarcoma of the intestine as opposed to the well known obstruction produced by carcinoma. The mucosa was densely infiltrated with tumor tissue, and, for a distance of about 8 cm. in the center of this area, the mucosa was completely replaced by tumor tissue showing a slight ulceration. Passing from this central zone, the infiltration of the mucosa in each direction became less and less marked, and, at the margins, of this area, the mucosa appeared merely speckled with pigment. There were few distinct tumor nodules in the mucosa outside its central area of dense infiltration. The lymph nodes of the mesentery immediately adjacent to this area formed a soft mass about 5 by 6 cm., connected with the growth by strands of tumor tissue extending in the mesenteric lymphatics. Extensive invasion of the mesenteric lymphatic vessels radiating from the growth to the mesenteric lymph nodes is so characteristic of primary neoplasm that, considering this condition together with the general character of the large tumor growth in the small intestine and the absence of any other growth suggestive of a primary tumor, there seems to be little room for doubt that this was the starting point of the entire process.

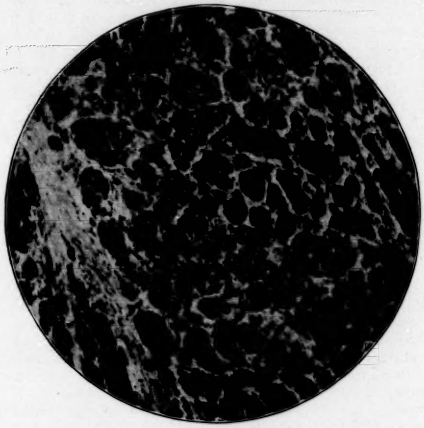

Fig. 3.—Section from a nodule in the intestine, slightly reduced from a photomicrograph × 150.

Other findings of interest were obtained. The peritoneal cavity contained about a liter of bloody fluid and, although there were no tumor nodules in the peritoneum, there was a distinct diffuse pigmentation of the peritoneal surface, particularly in the inguinal region. There was a bloody exudate, about 600 to 700 c.c., in each pleural cavity despite the absence of tumor metastases in the pleural surfaces. The pericardium contained a normal amount of fluid although the epicardium was studded with minute, black tumor nodules, especially over the auricles.

The heart was extensively invaded by metastases. The endocardium of the right ventricle was speckled with innumerable tumor nodules, as were also the auricles, the largest nodule being about from 2 to 3 mm. in diameter; in the interventricular septum, however, there was a tumor nodule about 12 by 18 mm. The myocardium was everywhere studded with minute tumor nodules.

The lungs showed a great number of minute black tumor nodules in the pleura, especially in the lower right lobe, most of them from 1 to 2 mm. in diameter. The dependent portion of the lower lobe was boggy, but it showed no definite areas of consolidation. The cut surface was moist and exuded frothy fluid, but showed no areas of consolidation and no visible tumor growth. There was one tumor nodule in the lower lobe about 1 c.c. in diameter. The left lung exhibited a small number of pleural tumor nodules and showed a similar hypostatic edema. The anterior surface of the lower lobe contained a nodule 3 or 4 cm. in diameter, beneath the pleura, extending about 3 cm. into the lung, and composed of black-brown tumor tissue. Two nodules about 1.5 cm. in diameter were located close at hand. The lymph nodes at the hilum of the left lung were enlarged, hard and black, and infiltrated with tumor tissue. There was less involvement on the right side and at the bifurcation of the trachea. No healed tuberculous lesions or acute pneumonic foci were found.

The liver was about normal in size, despite extensive involvement by masses of pigmented tumor growth. The largest in the anterior surface measured approximately 8 cm. in diameter, and there were several nodules measuring from 2 to 4 cm. Between the tumor nodules, the liver tissue seemed approximately normal. The two lobes were involved about equally by metastases. The liver weighed 1,620 gm., of which approximately one fifth was tumor tissue.

Except for the large mass in the jejunum, the alimentary canal showed but slight involvement. The mucosa of the stomach was spotted with flat pigmented spots up to 2 mm. in diameter; many of these were of pin point size. The same was true in the duodenum. The mucosa of the large intestine showed no tumor involvement. The small intestine, however, showed occasional pigmented spots. Some of the largest of these spots were ulcerated; this distribution was irregular, and nowhere were the intestinal spots numerous except in the case of the large mass in the jejunum previously described. About 50 cm. below, this mass was one ulcerated mucosal nodule 2 cm. in diameter. The colon showed no tumor masses, although there were occasional pigmented spots in the serosa. The appendix showed no involvement by the tumor tissue. It had a mesentery of its own, contained numerous fecal concretions, and was free. There was a Meckel's diverticulum about 8 cm. long, with a lumen about the same size as the intestine.

The kidneys contained only a few small tumor nodules, the largest about 3 mm. in diameter. No tumor growth could be found in the suprarenals. The urinary bladder mucosa was flecked with numerous tumor nodules, but otherwise was normal, and there were no tumor growths in the prostate.

Fig. 4.—Cross-section through hypophysis, showing involvement of posterior lobe and infundibulum infiltration into the anterior lobe and normal tissue, reduced from a photomicrograph × 6.

The brain was normal in size, weighing 1,300 gm. In the dura over the cerebrum were several small pigmented spots, not adherent to the skull. The pia arachnoid showed no tumors. The entire infundibulum was black, and thickened to 2 or 3 mm. in diameter. This condition stopped abruptly just below the tuber cinereum. The pigmentation continued into the hypophysis. Apparently the posterior portion of the hypophysis was full of black pigment, but the gland as a whole was not much enlarged. The sella turcica was neither involved nor enlarged. No tumors were seen on the external portion of the brain. Transverse sections through the hardened brain showed numerous tumor growths. The largest was in

the white matter of the right occipital lobe near the mesial surface and near the parieto-occipital fissure, measuring 3 cm. transversely, 2 cm. anteroposteriorly, and from 1 to 1.5 cm. vertically. A nodule about 1 cm. in diameter lay beneath this, near the inferior surface of the lobe. Another large nodule was present beneath the floor of the left lateral ventricle just above the crus; this measured about 2 cm. transversely, 1.5 cm. anteroposteriorly, and from 0.5 to 1 cm. vertically. A nodule about 2.5 cm. long by 1.5 cm. thick filled the right lateral ventricle in its entire extremity, arising from and nearly replacing the right lenticular nucleus, with a small nodule in the white matter beneath the right inferior frontal fissure. A small nodule, measuring from 7 to 8 mm., was found in the white matter beneath the mesial surface of the left lobe under the collosomarginal gyrus. No nodules were found in the gray matter of the cerebrum, and none in the pons, medulla or cerebellum.

The bones grossly showed no evidence of tumor with the exception of the calvarium, which was full of small secondary growths in the form of black spots, and the ethmoid plate was infiltrated with black tumor tissue.

The tumor everywhere was most intensely pigmented, of a deep brown, and the tumor cells themselves could rarely be seen because of the amount of pigment. Where these were visible they were found to be of medium size, round or oval, with uniform granular nuclei, and a fair amount of cytoplasm.

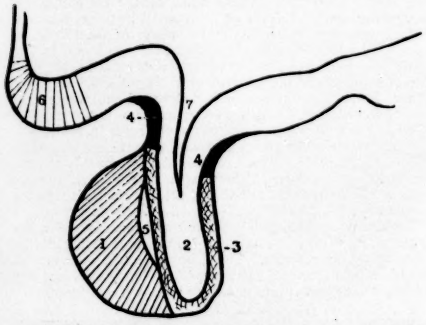

Fig. 5.—Diagrammatic sketch of hypophysis. Modified from Tilney. The figures represent: 1, anterior lobe; 2, 3, 4, posterior lobe; 2, pars nervosa, with neural stalk and infundibulum; 3, pars intermedia; 4, pars tuberalis; 5, residual lumen; 6, optic chiasm; 7, third ventricle.

They were usually arranged in small alveoli, and they grew through the tissue spaces and lymphatics. The pigmented cells were often enormously enlarged by the pigment. In addition to the tumor nodules, small foci of tumor cells were found distributed widely throughout the body.

In the lungs, many of the capillaries were packed with pigmented cells, and these were found free in the blood in the large vessels as well as in the alveolar spaces.

In the kidneys, masses of pigment granules were found in some of the tubules, and occasionally pigmented cells were present in the glomerular capillaries. Otherwise the kidneys showed little change.

The hypophysis showed a massive infiltration involving the infundibulum, completely replacing the posterior lobe and all but a small portion of the anterior lobe, which remained compressed but otherwise normal in appearance.

The pigmented tumor cells seemed to cause no inflammatory reaction and no degenerative changes in the tissue adjacent to them. In the large tumor nodules, the original tissues had been totally replaced.

COMMENT

The important pathologic and clinical findings in connection with this case are: (*a*) the primary origin of a melanoma in the jejunum; (*b*) the extensive metastases; (*c*) the multiplicity of symptoms; (*d*) the absence of definite localizing signs; (*e*) the evidence of involvement of the pituitary with a more or less selective action on the infundibulum and posterior lobe.

The pars nervosa of the hypophysis is a downgrowth from the floor of the midbrain, and develops into a bulbous process, the infundibular body, attached to the tuber cinereum by a slender neural stalk; the epithelial portion arises from an ectodermal evagination of the vault of the oral cavity, Rathke's pouch, grows backward and adheres to the floor of the midbrain. The downgrowth of the pars nervosa carries with it a thin layer of epithelial cells, the pars intermedia, which covers the infundibular body. By lateral budding, another epithelial portion, the pars tuberalis, surrounds and becomes attached to the neural stalk and tuber cinereum (summarized from Towne).

The exact function of the hypophysis as a whole or its component portions as individual structures is unknown. Many clinical symptoms have been ascribed to overactivity of this particular gland, which might well have been caused by either altered secretion or reduced secretion. The signs and symptoms that may be regarded as quite definitely related to a pathologic condition present in or about the pituitary body are: adiposity, drowsiness, dry skin, pronounced asthenia, polyuria, alteration in the growth of hair, sexual disturbance, particularly reduced desire and power, subnormal temperature and dulness. Symptoms and signs are ascribed to the anterior lobe by some, and the same symptoms and signs apparently quite as well referred to the posterior lobe by others. As yet, the results of anterior lobectomy, posterior lobectomy, high stalk section, low stalk separation, infundibular irritation and the like remain quite undecided.

A patient is observed who exhibits a metastatic tumor involving a portion of the neural stalk, the entire infundibulum, completely replacing the posterior lobe of the hypophysis and partially infiltrating the anterior lobe although leaving a considerable portion undisturbed. Clinically, the patient shows pronounced drowsiness, generalized and marked asthenia, interference with the growth of hair, branny desquammation, polyuria, polydipsia, no glycosuria, reduction and rapid loss of sexual function, but there is no enlargement of the hypophysis sufficient to produce pressure erosion of either clinoid, or any chiasm disturbance resulting in definite hemianopia. The latter consideration is of some importance in ruling out the frequent reference made to regional pressure of pituitary tumors as causal factors in the production of the foregoing symptoms, rather than to alteration in the gland itself.

We believe that the symptoms are dependent on the more or less selective infiltration of the hypophysis and especially that of the infundibulum and posterior lobe. The persistent yawning may be due to the same condition, although it is well recognized that such a symptom is found in epidemic encephalitis, frontal lobe tumors [12] and tumors elsewhere in the brain.[13] It is also well known that increased intracranial pressure from even so remote a tumor as one in the cerebellum may produce the symptoms of pathologic changes in the pituitary to the extent of producing glycosuria. The mechanism of such a result may be: (1) obstruction to the secretion from the hypophysis; (2) stimulation of the hypophysis; (3) irritation by tension of the walls of the recessus infundibuli, or as suggested by recent work,

12. Kennedy, Foster, in Nelson's Loose Leaf and Living Medicine.
13. Bailey, Percival: A Study of Tumors Arising from Ependymal Cells, Arch. Neurol. & Psychiat. **11**:1 (Jan.) 1924.

(4) the production of a lesion of the para-infundibular hypothalmic region.[14]

The diffuseness of the cerebral metastases makes an absolute interpretation of the neurologic findings quite impossible. The pyramidal tract interference seems due to the presence of the mass in the region of the lenticular nucleus. Perhaps, if the patient had been able to respond dependably, we should have been able to demonstrate the occipital lobe involvement.

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THE UNILATERAL FUSED KIDNEY

REPORT OF CASE

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NEW YORK

Of congenital renal anomalies, the unilateral fused kidney is probably the rarest. Hunter,[1] in 1785, presented the first authentic case, and since then scattered reports appeared in the literature, which were reviewed by Stein.[2] The rarity of the condition may be surmised from the fact that of thirty-four renal anomalies found by Stewart and Lodge [3] in 6,500 necropsies, only one unilateral fused kidney was encountered. Morris,[4] in 15,908 necropsies, also found only one case.

The greatest majority of the unilateral fused kidneys were discovered on necropsy, the patients having died from some other causes, while in a few instances the condition was found on the operating table. Colmers [5] was the first to recognize the anomaly in a living patient by double ureteral catheterization and pyelography. Since then five more cases were reported by Stein [6] (one case); Bugbee and Losee [7] (two cases), and, more recently, by Hyman [8] (two cases), in which the diagnosis was made by the same procedure. The case cited here is, therefore, the seventh on record. Although the condition is easily demonstrated by pyelo-ureterography, it is evident that, with the advent of this procedure and its application in thousands of cases within the last decade, the number of cases reported was not materially increased.

Unilateral fused kidney should not be mistaken for a horseshoe kidney. In the latter, the fusion occurs either at the upper or at the lower poles, and the kidneys are placed on each side of the vertebral column, being united by an isthmus of renal or fibrous tissue. In the unilateral fused kidney there is a transposition of one kidney to the opposite side, and the fusion with the other kidney is more or less complete. The result of the fusion is a large, usually lobulated kidney mass situated on one side, or, in exceptional instances, in front of the vertebral column .(the so-called "prevertebral kidney"), with two separate pelves and two ureters, which, on leaving the kidney, join the bladder in a normal fashion, one of them necessarilly crossing the spinal column in order to reach the opposite side of the bladder. The condition must also be differentiated from congenital absence of one kidney (solitary kidney), in which the element of fusion is lacking, the anomaly merely representing failure of the embryonal development of one kidney. In these cases there is either a total absence of one kidney, or the kidney and the ureter on one side are represented by some vestigial structure.

Both the horseshoe and the solitary kidneys are by far more frequent in occurence. Lipshutz and Hoffman,[9] in a collected series of 70,502 necropsies, found 105 horseshoe kidneys, an incidence of one in every 671 bodies. According to Judd,[10] of 2,424 renal operations at the Mayo Clinic, seventeen were horseshoe kidneys, one in 142. Eisendrath,[11] in a series of 77,812 necropsies reported by various authors, collected eighty-five instances of solitary kidney, one in every 915 bodies.

Fig. 1.—The right pelvis was injected with the opaque solution, the catheter withdrawn for the greater part of its course, and more of the solution injected into the ureter. The pyelo-ureterogram thus obtained shows an abnormally placed, irregularly shaped, dilated pelvis. The upper part of the right ureter is represented by a thin, faintly visible streak, while below the brim of the pelvis there is a definite dilatation of the ureter. The left ureteral catheter, after emerging from the left side of the bladder, crosses the spinal column and ends by curling on itself along the right side of the third and fourth lumbar vertebrae, below and to the left of the right pelvis. The lower pole of the fused kidney may be seen to extend 4 cm. below the crest of the ileum.

In the seven cases in which the anomaly was recognized by pyelography, the predominating symptoms were abdominal pain and, to lesser extent, pressure symptoms, such as constipation. A palpable abdominal tumor was present in all but one case. The case cited here differed from others in that an anomaly of the external genitalia was present. Surgical kidney disease was present in one case (calculous pyonephrosis). Cystoscopy invariably revealed a normal bladder configuration and normally placed ureteral orifices.

14. Bailey, Percival; and Bremer, F.: Endocrinology **5**: 761 (Nov.) 1921.

1. Hunter: Double Kidney on One Side of the Body, with None on the Other, M. Tr., London **8**: 250, 1785.
2. Stein, A.: The Clinical Importance of Unilateral Fused Kidney, Am. J. Obst. **73**: 449 (March) 1916.
3. Stewart and Lodge: Unilateral Fused Kidney and Allied Renal Malformations, Brit. J. Surg. **11**: 27 (July) 1923.
4. Morris, H., cited by Stewart and Lodge (Footnote 3).
5. Colmers: Anurie bei Hufeisenniere, Verhandl. d. deutsch. urol. Gesellsch., 1911, p. 732.
6. Stein, A.: Unilateral Fused Kidney, Am. J. Obst. **68**: 48 (July) 1913.
7. Bugbee and Losee: Congenital Anomalies of the Kidney, Surg., Gynec. & Obst. **28**: 97 (Feb.) 1919.
8. Hyman: Unilateral Fused Kidney, J. Urol. **7**: 321 (April) 1922.
9. Lipshutz and Hoffman: A Contribution to the Knowledge of Fused Kidneys, Ann. Surg. **68**: 39 (July) 1918.
10. Judd, E. S.; Braasch, W. F., and Scholl, A. J., Jr.: Horseshoe Kidney, J. A. M. A. **79**: 1189 (Oct. 7) 1922.
11. Eisendrath, D. N.: Congenital Solitary Kidney, Ann. Surg. **79**: 206 (Feb.) 1924.

REPORT OF CASE

Unilateral fused kidney on right side of body, with two separate pelves and two ureters. Chronic nephritis involving the left part of the fused kidney with arterial hypertension. Hypospadias.

History.—L. L., a man, aged 21, born in Russia, a salesman, referred to me by Dr. Louis Greenwald, cousulted a surgeon in April, 1923, for pain in the sacral region and in the right lower abdominal quadrant. At that time the patient had a slight

Fig. 2.—The opaque solution was allowed to drain off the right pelvis and was then injected through the left catheter. The left pelvis of the fused kidney is represented by an irregularly oval shadow around the end of the left catheter.

right inguinal hernia, which he noticed four years previously after lifting a heavy weight. An appendectomy was performed and the hernial sac repaired.

Following the operation, the patient began to complain of heaviness in the lower part of the abdomen, throbbing, and four months before I saw him noticed a lump in the right lower quadrant. He also had frequent attacks of intense frontal headaches, dizziness and general nervousness. The bowels were regular and the appetite was good, but the patient complained of insomnia. He sought the advice of Dr. Greenwald, who thought the tumor to be a dropped kidney in view of the relaxed condition of the abdominal wall. This diagnosis was overruled by three eminent surgeons and internists of this city, who were unanimous in the opinion that the condition was some intraperitoneal growth, and a laparatomy was advised. The roentgenologist reported both kidneys to be in their normal places (?).

Exploratory laparotomy was performed at St. Mark's Hospital, March 13, 1924, at the recommendation of the consultants called in the case. No neoplasms were found in the peritoneal cavity. Behind the peritoneum, to the right, a large irregular mass was felt. When the posterior peritoneum was incised, the mass was identified as kidney. It was multilobular, very low in position, and partly fixed to the posterior abdominal wall. It could not be pushed upward to the normal position. The pelvis of the kidney was not investigated. As function on the other side was not known, the kidney was wisely left alone, the posterior peritoneum sutured, and the abdominal cavity closed. The patient made a speedy and uneventful recovery, and came under my observation. April 17.

Examination.—The patient was robust looking, well nourished and fairly well developed. The second aortic sound was accentuated, and there was a hemic murmur at the base of the heart transmitted to the large vessels. Two healed scars were present: one parallel to the Poupart ligament on the right side, the other, a right rectus incision scar. Occupying the greater part of the right side of the abdomen there was an oblong palpable mass, firm, not tender on pressure, slightly movable, and apparently not attached to any of the abdominal viscera. The tumor did not extend beyond the median line of the body. There was hypospadias. The reflexes were normal. The blood pressure was 162 systolic and 90 diastolic. Blood count revealed 5,500,000 red cells, and 13,000 white cells, with 80 per cent. polymorphonuclear leukocytes. The hemoglobin was 75 per cent. The Wassermann reaction was negative. The urine was clear, with a specific gravity of 1.022; it contained a trace of albumin, but no sugar; on microscopic examination, a few hyaline and granular casts were found, but no pus cells and no erythrocytes.

The bladder was of normal capacity. The mucosa had a normal luster, and no abnormalities of any kind were noted. Both ureteral orifices were small, slitlike and normally situated. A renal catheter (No. 6 Charrière) of the whistle tip variety was introduced into the right ureter and passed up without obstruction. An olive tip catheter of the same size passed up into the left ureter also without any apparent obstruction. The flow of urine was normal from the right catheter and somewhat rapid from the left. The urine obtained from the right side was clear, with a specific gravity of 1.024; it had no albumin and no sugar; urea was 1.4 per cent.; microscopically it contained no abnormal constituents. The urine obtained

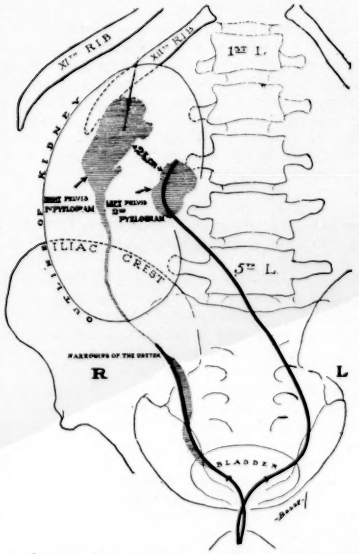


Fig. 3.—Interpretative reconstruction of the two combined pyelograms.

from the left catheter was much paler, had a specific gravity of 1.012 and contained a trace of albumin; the urea was 0.4 per cent.; on microscopic examination, a few granular and hyaline casts were found. Phenolsulphonephthalein was injected intravenously, and the dye appeared in the urine obtained from the right catheter at the end of three minutes, and on the other side at the end of five minutes. No quantitative estimation of the dye elimination was made, as a pyelogram was contemplated which would have interfered with the pro-

cedure. It was apparent, however, that the concentration in the right urine was very good and that there was a striking diminution of the dye output from the left side.

Thirteen cubic centimeters of a 15 per cent. sodium bromid solution was injected through the right catheter until the patient began to complain of slight pain in the right lumbar region. The catheter was then partly withdrawn and more of the solution injected into the ureter. The plate was taken and the opaque solution allowed to drain off completely. The film was developed while the patient was still on the table with both catheters indwelling. When the unusual condition revealed itself, it was decided, contrary to my rule of not making double pyelograms at one sitting, to inject the opaque solution through the left catheter. Fifteen cubic centimeters was injected, and the pateint began to complain of pain in the umbilical region, to the right of the median line.

SUMMARY AND CONCLUSIONS

The pyelograms and the interpretative sketch shown here prove conclusively that we were dealing in this case with a unilateral fused kidney. That fusion actually existed could be verified by the previous operative findings, which showed a single large kidney mass. Although the fusion was complete, the parts of the kidney drained by two separate ureters excreted urines of entirely different composition and had different functional capacities, and it was evident that the portion of the kidney drained by the left ureter was a seat of chronic nephritis. The arterial hypertension was another interesting feature in the case. The abnormal position of the ureters was undoubtedly responsible for the interference with kidney drainage, and was a factor in producing dilatation of both pelves. Abdominal pain brought about by distending the renal pelvis with solution is a useful diagnostic sign, when felt on the opposite side. The case is of clinical significance, because it emphasizes the importance of a thorough urologic investigation in obscure abdominal conditions.

307 East Seventeenth Street.

Clinical Notes, Suggestions, and New Instruments

THE KEEN OPERATION FOR CICATRICIAL TRACHEAL STENOSIS

CHEVALIER JACKSON, M.D., AND W. W. KEEN, M.D., PHILADELPHIA

The purpose of this report is to call attention to a unique operation devised by W. W. Keen for cicatricial tracheal stenosis, which was reported at the time, twenty-five years ago,[1] but which seems to have been buried in the enormous mass of surgical literature. The cicatricial stenoses resulting from industrial and war injuries render it of timely importance that attention be called to the procedure.

Mrs. M., aged 41, was referred to the Bronchoscopic Clinic, Dec. 24, 1919, by Dr. George Fetterolf for the treatment of dyspnea so severe that walking at a slow pace caused weakness, and exertion of any kind was avoided. Indrawing at the guttural fossa, around the clavicles, and in the intercostal spaces called for tracheotomy, which, however, we were able to avoid through the prompt relief afforded by peroral tracheal bouginage. The patient gave the history of having had an operation performed by Dr. W. W. Keen for tracheal stenosis twenty years previously (March 31, 1899). There was complete relief following the operation until 1911, when increasing dyspnea on exertion developed, and grew much worse, stridor developing in the year 1917.

1. Jones, W. S., and Keen, W. W.: Two Unusual Cases of Surgery of the Trachea, Philadelphia M. J., June 10, 1899.

ORIGINAL REPORT (BY DR. KEEN)

Miss E. K., aged 21, was referred to me [twenty years ago] by Dr. W. S. Jones of Camden for extreme dyspnea due to a firm stricture of the trachea due apparently to the cicatrization of a suppurative focus of unknown origin. The laryngoscopic examination by Dr. Jones showed at a short distance below the vocal bands a small, nearly round opening, the diameter of which was about half the distance of the vocal bands from each other. After a careful examination, we reached the conclusion that the stenosis was but a little distance below the cricoid and extended over somewhat more than one ring.

Operation by Dr. Keen.—March 31, 1899, I made a vertical incision from the middle of the thyroid nearly to the sternum. I was extremely careful to see that every bleeding vessel was tied before opening the trachea. The patient first took chloroform in the horizontal position. As soon as I was ready to open the trachea, I placed her in the Trendelenburg position and then split the trachea longitudinally for about six or seven rings, but found that, to get free access to the stricture, it was necessary to split the cricoid. I then placed in the lower part of the incision in the trachea a tracheotomy tube, and

Bronchoscopic views of tracheal stenosis: *C*, membranous web appearing in the trachea twenty years after Dr. Keen's removal, by submucous resection, of a cicatricial stenosis of the trachea; *D*, present condition.

connected it with the chloroform inhaler by means of the inner tube of a Hahn tampon-cannula 12 mm. in diameter, fastening the tube in place by disinfected tapes. The outer sponge-covered portion of the Hahn cannula was not used. I then found that the upper border of the stricture was at the third tracheal cartilage, and extended over the third and fourth and to the upper border of the fifth. The somewhat puckered appearance of the mucous membrane suggested that it might be the result of a local ulcer, though the history scarcely furnished a sufficient basis for such a belief. Finding firm resistance of the submucous tissue, I dissected back the mucous membrane as two flaps upward and downward over all the area covered by the stricture. I next dissected out the fibrous tissue. By an unfortunate accident, this was lost and so no microscopic examination could be made. During this procedure the sides of the trachea were held apart partly by narrow retractors and partly by two silk sutures, which were held by assistants. The hemorrhage was not severe, but was troublesome by obscuring the field of operation. It was sponged away with small pads of gauze. One vessel on the wall between the trachea and the esophagus spurted to such an extent that I tied it with catgut. This I afterward removed, and twisted the vessel so as not to have the projection of the knot, which by bulging forward the mucous membrane might interfere with respiration. The wall of the esophagus was exposed at one point. I next sutured the mucous membrane with silk, but in the middle line I could not bring it quite together. A little gap was left there to granulate. The chloroform tube was now removed, and the trachea, which had been already partially sutured, was completely closed by catgut stitches passing through the perichondrium and pretracheal tissues. The skin was then closed with silkworm-gut.

The whole operation required about an hour and twenty minutes. The patient's temperature on the afternoon of the operation rose to 100.4. After that it was never above 100, and by the second day had reached 99. The external sutures were removed a week after the operation, primary union having taken place without untoward result. Laryngoscopic examination, May 23, 1899, two months after operation, showed slight

redness of the vocal cords. The tracheal stricture showed no tendency to return. Her voice and breathing were normal.

The method adopted in attacking this possibly unique case (for we have not found any similar one recorded) was most satisfactory. The easy access to the stricture; the dissection of the mucous membrane from the surface of the stricture, and its replacement and suture; the avoidance of any tracheotomy (i. e., the wearing of a cannula); the advantages of the Trendelenburg posture, and the primary union obtained, are the points on which we laid the most stress.

SUBSEQUENT HISTORY (BY DR. JACKSON)

Roentgen-ray examination Jan. 12, 1920 (twenty-one years after the cure of the original stenosis), by Dr. H. K. Pancoast revealed, on lateral view, the constriction in the trachea a little less than 1 inch below the level of the cricoid cartilage. The defect seemed to be mainly anterior, and was about on a level with the lower border of the sixth cervical vertebra. The anteroposterior view at this level showed some constriction laterally but not to any great extent. One would therefore suppose that the main part of the defect was in the anterior wall.

In consultation with Dr. Keen and Dr. Fetterolf, it was decided to do a diagnostic bronchoscopy to determine whether or not malignant or such extensive cicatricial conditions existed as would require repetition of the external operation.

January 22, inspection of the trachea through the bronchoscope under local anesthesia revealed a membranous web on the anterior wall of the trachea at the level of the fourth ring. The tracheal lumen was narrowed to an elliptical opening 2 mm. by 7 mm. in size, as shown in the accompanying illustration. There were no signs of neoplasm or of active inflammatory lesions. Jackson's silk-woven steel-stemmed endoscopic bougies up to size 18 French were passed through the strictured area. The time consumed was four minutes, ten seconds. Considerable increase in dyspnea followed the procedure, necessitating close watching of the patient. Tracheotomy, however, did not become necessary. At the end of one week the breathing was considerably improved. It was then decided that there was no recurrence of the extensive original condition, and that perhaps a few simple endoscopic dilations of the stenosis would restore the patient to the previous very satisfactory postoperative condition.

At intervals of about a week, for eight weeks, increasing sizes of the endoscopic bougies were inserted, without anesthesia, general or local. The time required for each treatment varied from fifty-two seconds to two minutes, twenty-three seconds, the patient returning to her home each day, except in the first instance. After the eighth endoscopic bouginage, she was entirely free from dyspnea even on ordinary exertion. The bronchoscope showed the entire disappearance of the web noted at the first inspection.

A second roentgenographic examination was made, May 10, 1920, by Dr. H. K. Pancoast who reported that the constriction had almost entirely disappeared.

COMMENT (BY DR. JACKSON)

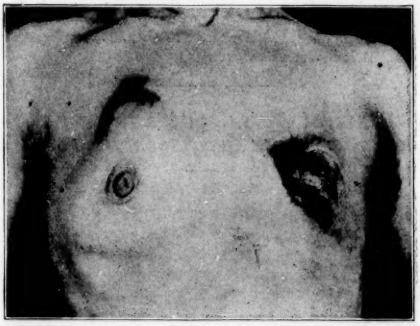
The recurrence of dyspnea, after thirteen years of complete relief afforded by the ingenious and very successful submucous resection of the tracheal stenosis by Dr. Keen, was evidently due to gradual contraction of submucosal cicatricial tissue, which drew a weblike structure across the tracheal lumen. The prompt yielding of this weblike stenosis to the simple method of peroral endoscopic bouginage indicates clearly that the secondary stenosis was of such a relatively less vertical extent as not truly to warrant the term "recurrence." The value of the steel-shanked, silk-woven endoscopic bougies, in the treatment of this mild type of tracheal stenosis of limited extent, is well exemplified. The comparative ease with which the peroral endoscopic treatment is applied without even local anesthesia after the first few treatments is also well demonstrated. It could have been dispensed with even in the first treatment, had it been desirable to do so. In working with children by this method for either diagnosis or treatment of laryngeal or tracheal stenosis, no anesthetic, general or local, is ever used at the Bronchoscopic Clinic. It is evident that the peroral endoscopic bouginage would not have sufficed to cure the original stenosis, nor do I know of any other method that could accomplish what was done in this case by the unique operation devised by Dr. Keen.

The patient seems now, three years after the last dilation, perfectly well. It was deemed advisable to inspect the trachea and, if necessary, to pass the No. 30 bougie occasionally to prevent return of the contraction; but this has not yet been, and may never be, necessary. Contraction of cicatricial tissue seems to obey no law as to when it will cease.

BILATERAL CANCER OF THE BREAST IN THE FEMALE FOLLOWING PROLONGED IRRITATION *

ROBERT B. MCGRAW, M.D., AND RUPERT SCHRANKEL, M.D.,
NEW YORK

An unmarried woman, aged 41, was admitted to the Second Medical Service at Bellevue Hospital, under Dr. Eugene Du Bois, Aug. 9, 1923, complaining of stabbing pains of four months' duration in the sacrum; the pains radiated to the right leg and to the amputation stump of the left leg. The patient stated that, at the age of 8, the left leg had been amputated at the midthigh, because of injury. Immediately after operation, she wore a crutch on the left side and has continued to do so ever since. At 23, pain in the right kidney region and urinary symptoms led to an exploratory operation, which disclosed a tuberculous kidney, and a nephrectomy was done. Just before this, the patient had fallen and fractured the right patella. This was repaired, by open operation, at the same time that the nephrectomy was done. After this operation, she used two crutches and has continued to do so ever since, walking with them held tight to the body, so that the breasts became compressed toward the midline. About three months before admission, the patient noticed that both breasts were growing smaller, the left more rapidly than the right, and that there was a small, hard lump, about the size of a marble, in the upper and inner quadrant of the right breast. The lower half of the left breast had become shriveled,



Appearance of breasts in case of carcinoma following prolonged irritation.

and showed a small, reddened area which, in a few days, ulcerated and discharged small amounts of clear, yellow fluid, occasionally blood streaked. The breasts were never painful, but grew progressively smaller up to the time of admission to the hospital.

Physical examination revealed that both breasts were small and atrophic. The right breast showed a stony hard mass, irregular in outline, about the size of a hen's egg, in the upper and inner quadrant. The nipple was retracted, but there was no discharge. The mass appeared to lie just beneath the skin, which was brownish and hard over it, and to which it was attached. It was also fixed to the underlying structures, and was somewhat painful when moved over them. The right axilliary nodes were enlarged and firm. In the lower and inner quadrant of the left breast there was a large mass of

* From the Second Medical Service of Bellevue Hospital.

similar type. The skin over it was hard, red and drawn into folds. The surface of the mass was ulcerated, the ulcer involving the nipple, which was retracted. There was a clear, yellow, foul smelling discharge. The left axillary nodes were palpable.

A section of tissue removed from the left breast was submitted to Dr. Douglas Symmers for microscopic examination; he rendered a report of carcinoma.

The case is interesting chiefly from the standpoint of a history of long continued irritation, caused by the use of crutches, which the patient had used on one side for thirty-five years and on the other for twenty years. It is in accord with the irritation theory in the production of carcinomas, such as those developing from chronic irritation in chimney-sweeps, paraffin workers, natives who chew betel nuts, and clay-pipe smokers.

A CASE OF ENORMOUS PIGMENTED MOLE*

D. T. QUIGLEY, M.D., OMAHA

The patient, referred by Dr. Sol Ravitz of Omaha, is a man, aged 24, of good physique, mentally sound and in every way a normal person. He lives and works on a farm and has no trouble from his deformity except that in hot weather the

Patient bending forward, showing fissures.

sweat gathers in the deep fissures of the mole and causes local irritation.

The gross appearance is that of ordinary pigmented mole except that in the heavier, thicker areas the pigment is lighter, and in the thinner areas near the edge and in the smaller islands the pigment is much deeper, all the smaller spots and all the margins being completely black. The lighter and darker shades of brown prevail in the main mass. Hair is present in all the small spots and around the edges of the main mass. The genital organs are normal, but the breasts are enlarged and resemble those of a girl.

There has been no relative increase in size since birth.

A good description of the nature of these moles has been given by Ormsby.[1] A bibliography is given by him and by Fox.[2] Ormsby presents an illustration of a similar lesion covering the patient's whole hip. In the patient shown by Fox the area covered was quite as extensive as in this case, but the skin was not thickened. In my case, there is great

Appearance of mole with patient standing.

thickness of the skin, extending over the whole pigmented area, the thickness in some places being as much as 4 inches (10 cm.).

The parents and three brothers, uncles, aunts and cousins, are normal.

* From the department of surgery University of Nebraska College of Medicine.

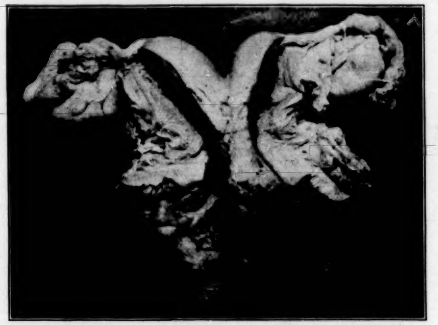
1. Ormsby, O. S.: A Practical Treatise on Diseases of the Skin, Philadelphia, Lea & Febiger, 1921.

2. Fox, Howard: A Case of Extensive Pigmented and Hairy Nevus, J. A. M. A. 58: 1190 (April 20) 1912.

DOUBLE UTERUS

JOHN J. CATLIN, M.D., BUFFALO, MINN.

Double uterus is a rather rare condition, but unless the possibility of such an abnormality is borne in mind, there is a chance that its occurrence will lead to mistake or difficulty in diagnosis, when with a normal organ there would be no difficulty. From recent literature, I have been able to find less than 150 reported cases. There are no doubt many more that have never been reported, and I can readily see how numerous others could exist without ever having been discovered.



Specimen of double uterus taken at postmortem, Feb. 16, 1924, at Catlin Hospital, Buffalo, Minn. The cervix of the left side uterus came into view through a speculum. The partition forming part of the double vagina may be seen in the lower part of the illustration. The right cervix is above; it had no protruding cervix, but appeared on examination with a speculum as an opening to the right side of the normal cervix and about 1 inch higher up. The right side of the vagina was incomplete or had been partially destroyed by operation when the patient was 11 and again at 17, when what was thought to be an abscess was drained. The outlines of a complete imperforate vagina could be made out, with a large rent through the middle.

The condition is due to a lack of proper fusion, or to a lack of absorption of the fused walls of the ducts of Mueller, which normally unite to form vagina, uterus and tubes, at about the seventh or eighth week of uterine life. All degrees of malformation may occur, from a simple bicornate uterus to a complete double uterus, with two uterine canals, two cervices and two vaginas.

The accompanying illustration shows a complete double uterus, or uterus didelphys. The specimen was secured from a woman who died of septicemia, following an abortion at about the fifth week.

REPORT OF CASE

Mrs. W. B., a housewife, aged 35, who weighed 135 pounds (61 kg.), had been married at 17; she was the mother of four healthy children, the youngest being 6 years old. The menstrual life began at 11, and had been normal except for the two occasions mentioned here.

While she was carrying her children, menstruation ceased entirely, except for a small showing on two occasions during one of the periods of pregnancy.

At 11, and again at 17, an abscess was opened through the vagina, toward the right of the cervix, which, from the history and the appearance of the remnant of the vaginal partition, was caused by an imperforate right vagina. The true condition of the uterus was not discovered until the patient's last sickness, and after she was seriously ill with general sepsis, which followed an abortion nearly two weeks before.

A CASE OF CONGENITAL BILATERAL VENTRAL HERNIA

CARL G. LEO-WOLF, M.D., NIAGARA FALLS, N. Y.

Recently, I had a chance through the courtesy of Dr. George P. Eddy of this city to examine a case of a condition that seems to be rather rare, judging from the few cases I have been able to find in the literature accessible to me.

An Italian boy, aged 1 year and 9 months, had never been seriously ill. He had had coryza at the age of ten months, and presented evidences, such as the square head and Harrison's groove, of rickets. In the recumbent position, he presented a flattened abdomen with only very slight bulging in both flanks (Fig. 1). When he was sitting up or standing, especially when crying, there was considerable bulging of both flanks (Figs. 2 and 3).

Fig. 1.—Flattened abdomen, in recumbent position.

Examination showed that the external and internal oblique as well as the transversalis were entirely missing on both sides; the rectus abdominis and the latissimus dorsi on both sides were normal, and well developed for the age of the child. The examining hand could readily feel the abdominal organs, as the abdominal wall in these regions appeared to consist only of skin, subcutaneous fat and peritoneum. The urinary bladder and the ureters seemed not to be enlarged, as they were in some of the few cases reported; the testes, however, were undescended.

The boy was otherwise well, to all appearances, and did not seem to suffer any discomfort; he ran around and played like any normal child of his age, and he refused to wear a supporter.

Fig. 2.—Bulging of flanks when child sits.

Fig. 3.—Bulging of flanks, in standing position.

The only similar cases I have been able to find in the literature are as follows:

Wyss:[1] partial defect of the external an internal oblique and the transversalis abdominis in a child, aged 10 months.

1. Wyss: Beitr. z. Chir., Festschr. f. Billroth, Stuttgart, F. Enke, 1892.

Steinhardt:[2] absence of the right external and internal oblique and the transversalis abdominis in a child aged 3 weeks.

Osler:[3] congenital absence of the abdominal muscles with distended and hypertrophied urinary bladder in a boy aged 6 years.

Parker:[4] congenital absence of external and internal oblique and transversalis abdominis in a new-born infant, weighing 5½ pounds (2.5 kg.). There was also enormous hypertrophy of the bladder.

Smith:[5] congenital absence of abdominal muscles, and other defects, in an infant. The bladder was situated abnormally high, but no marked abnormalities could be found in the urinary organs.

Bolton:[6] congenital absence of the lateral abdominal muscles, with enlargement of the bladder and ureters in a boy aged 3 weeks.

108 Buffalo Avenue.

RETROPERITONEAL LYMPHOCYTOMA CAUSING CHYLOUS ASCITES AND CHYLOTHORAX

BRADLEY L. COLEY, M.D., NEW YORK

The comparative rarity of true lymphocytoma is generally recognized. The case that came under my care was characterized by such unusual symptoms and presented such peculiar features that it seems justifiable to report it in full.

History.—L. D., a married woman, aged 48, had always lived on Long Island, and had been in perfect health until the onset of the present illness.

Two years before I saw her, she began to feel weakness and discomfort in the abdomen, which she attributed to an umbilical hernia, which, she states, had been present fifteen years. During this time, the abdomen had been large and pendulous. Associated with the feeling of discomfort, she had noticed dyspnea for the past eight months. There was a slight, intermittent, dull pain in the left upper quadrant. Her appetite, which had hitherto been excellent, began to fail, and there was some loss of weight. There were no other digestive symptoms except gaseous eructations, which came on after eating. There were no symptoms referable to the genito-urinary system. The family history was negative for malignant disease. The patient remembered no previous illness. She had always been in excellent health. She had not had any surgical operations.

The bowels had always been constipated until six months before, since which time the bowels had moved daily. The stools were apparently normal. Nocturia occurred once or twice. The patient felt full after a small meal. The appetite seemed to be failing. She did not sleep well. Six months before she weighed 220 pounds (100 kg.); four months before, 175 pounds (80 kg.); she had lost weight since; the amount was not known.

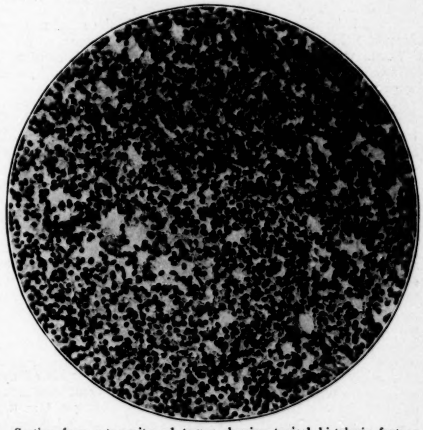
The menses had been regular until one year before, when the interval began to be prolonged from two to four months. There had been complete cessation for the last six months. Presumably the patient was approaching the climacteric at the time of onset of the present illness. She had been married twenty-seven years and had five children, four of whom were living and well. There had been no miscarriages.

Aug. 27, 1922, the patient consulted the family physician. He advised gastro-intestinal roentgen-ray examination, which was done with inconclusive findings. The patient was then advised to enter a hospital for observation, and was admitted to St. John's Hospital, Brooklyn, September 2, under the care of Dr. George F. Sammis.

The abdomen was not distended, rigid or tender; there was a fair amount of abdominal fat. Percussion over the left iliac region revealed definite dulness and resistance, and the outline of a mass that had a wave of fluctuation as of fluid. There was an umbilical hernia the size of a lemon. Percussion over the liver revealed slight increase of dulness. The extremities were normal.

A few days later an exploratory laparotomy was performed by Dr. Sammis, who found a thin, creamy fluid in the abdominal cavity. A large mass, fairly smooth, apparently involved the posterior peritoneum, the entire mesentery of the upper abdomen, and extended into the left pelvis. The uterus and the right ovary seemed to be normal. The tumor was studded with petechial hemorrhages. The omentum was ligated and the hernial sac removed. The wound was closed in layers; one rubber tissue drain was inserted. Not any of the mass was removed, because of its extensive involvement of the entire mesentery; the possibility of aggravating the condition, should it be malignant, and the impossibility of its removal, because of interference with the blood supply of the intestine.

Examination.—I saw the patient about four weeks after her uneventful convalescence. At this time she was suffering from severe dyspnea and orthopnea. She was well developed and well nourished, and evidently was chronically ill. The principal findings were signs of fluid at the right base extending posteriorly up as far as the scapular spine; i. e., dulness approaching flatness, loss of fremitus and distant voice sounds, the breath sounds being absent. The abdomen was rotund, not markedly distended, and presented a linear midline scar extending for a distance of 5 inches, its midpoint being the center of a line from the pubic symphysis to the ensiform cartilage. The umbilicus was absent. To the left of the incisional scar, an ovoid mass about 9 cm. in diameter, movable, firm but not stony hard, was indistinctly felt. The mass could be slightly shifted. Percussion over it gave a dull tympany. Palpation did not elicit tenderness. There was a slight shifting dulness, and a fluid wave was elicited. There were no engorgements of the superficial veins, no swelling of the extremities, and no glandular enlargements.



Section from retroperitoneal tumor showing typical histologic features of lymphocytoma.

Treatment and Course.—The following day, by thoracentesis, 5 pints of fluid of a milky character was withdrawn. This fluid was examined by Dr. Ewing and pronounced true chylous fluid. Following the aspiration, the patient experienced reilef from the distressing respiratory symptoms. However, a gradual progressive enlargement of the abdomen followed which necessitated aspiration ten days after the chest aspiration, at which time 6½ quarts of fluid was withdrawn, the nature of which was identical with that obtained from the right chest. Reaccumulation of fluid in the abdomen necessitated tappings at frequent intervals during the next thirteen months. The intervals at first varied from seven to ten days.

2. Steinhardt: Jahrb. f. Kinderh. **56**: 220.
3. Osler, William: Bull. Johns Hopkins Hosp. **12**: 331, 1901.
4. Parker, R. W.: Tr. Clin. Soc. London **22**, 1895; quoted by Osler.
5. Smith, E. B.: Proc. Roy. Soc. Med. Lond. **6**: 186, 1912-1913.
6. Bolton, C.: Tr. Clin. Soc. London **38**: 247, 1904-1905.

There was a long period in which tappings were unnecessary, from March 9 to June 29, 1923. Edema of the lower extremities was never present.

March 6, 1922, there were signs of fluid in the right chest, and a second right thoracentesis was performed, yielding 1¼ quarts of milky fluid. March 19, 2 quarts was removed from the left chest. From October, 1922, to November, 1923, I performed abdominal paracentesis thirty-five times, a total of 251 quarts being removed. Thoracentesis was resorted to three times, with a total of 6¼ quarts.

Five weeks after the first aspiration, the patient was removed to the Memorial Hospital, where an exposure of 16,000 millicurie hours of radium at 10 cm. distance was given with the pack placed directly over the abdominal mass. This treatment resulted in a marked decrease in the size of the mass as made out by palpation, though the rate of the accumulation of fluid was not lessened. Six weeks later, a second radium pack treatment was given in the same manner, with a dosage of 18,000 millicurie hours at the same distance. Following this treatment, the abdominal mass diminished in size.

Two months later, the accumulation of fluid suddenly diminished, and for fifteen weeks no tappings were needed. Coincident with the cessation of reaccumulation of the fluid there was a marked improvement in the general condition, strength returned, and the patient was up and about and doing light housework.

The third radium treatment was given in the same manner, May 8, 1923, the dose being 18,000 millicurie hours.

Seven weeks after the third treatment, the abdomen began to swell very gradually, until June 29, 1923, when aspirations were begun again. No further radium treatments were given, and the patient's general condition continued satisfactory despite repeated tappings, until September 1, when she began to fail and grew progressively weaker with loss of appetite and severe pain in the abdomen associated with severe "dragging down" feeling. She died, December 5.

Postmortem Findings.—Examination, limited to the abdomen, was performed six hours after death. There was about 4 quarts of greenish, opaque, milky fluid free in the peritoneal cavity. The peritoneum was greatly thickened. A firm, cordlike adhesion attached a loop of ileum to the lower right anterior parietal peritoneum. The transverse colon and most of the jejunum was involved in a meshwork of adhesions, some fibrinous and velamentous, others firm and fibrous. The pelvic organs were normal. The liver was not greatly enlarged, and seemed normal save for extensive cloaking in adhesions. The stomach, duodenum and spleen and kidneys seemed normal.

A fleshy tumor mass occupied the posterior portion of the abdominal cavity, which was retroperitoneal and extended from the brim of the pelvis upward, apparently fading out at the level of the attachment of the diaphragm. It extended somewhat farther on the left side than on the right, and completely invested the aorta and vena cava. The thoracic duct was not definitely identified, but was necessarily involved. The mass was reddish, homogeneous and firm. There were no hemorrhages into its substance, and it was not densely hard or nodular. At several points in the adjacent retroperitoneal space, small, ovoid, yellow, encapsulated bodies were seen. They shelled out readily, and seemed like inspissated fat. There was a similar ovoid (discoid) tumor mass, approximately 8 by 10 cm. in diameter and 4 cm. in thickness, growing between the leaves of the mesentery of a loop of high ileum. The mass resembled closely the retroperitoneal tumor, but was not directly contiguous. It was removed for a specimen. One of the yellow bodies mentioned above was removed from the under surface of the right lobe of the liver.

Microscopic examination by Dr. James Ewing revealed that the tumor was composed of a diffuse growth of small lymphocytes. These grew diffusely, infiltrating all tissue actively, and without any inflammatory or fibrous reaction. There was little tendency to necrosis. The walls of the blood vessels were infiltrated. The process was a true lymphocytoma. It fell in the group of true pseudoleukemia, except that the process was locally aggresive and malignant. It was a true tumor of lymphocytes.

114 East Fifty-Fourth Street.

AN UNUSUAL CASE OF OSTEOMYELITIS OF THE CLAVICLE

NATHANIEL BERCOVITZ, M.D., AND J. S. CHU, M.D.,
KACHEK, HAINAN, CHINA

K. L. S., a Chinese, aged 19, married, entered the hospital Dec. 20, 1923, with extensive ulceration over the right clavicle, with both ends of the clavicle exposed, being held in place by a bridge composed of skin and connective tissue, as shown in Figure 1.

The family and past history were unimportant except that the patient had smallpox and measles when a child, with frequent attacks of malaria. He had had occasional conjunctivitis, but no bone or joint pains. There was no history of venereal infection.

Fig. 1.—Posterior surface of clavicle.

The present condition dated back about ten months, at which time the patient awoke, one morning, with a dull ache over the right clavicle. At first there was no redness or swelling, but gradually the pain became worse until he could not move the shoulder or the arm or fingers. Within a day or two the region over the clavicle began to swell. The attack was accompanied by high fever. A few days after the attack began the patient had a sore throat (tonsillitis?), but this passed away after a few days.

As the pain became more intense, a Chinese external plaster was applied without improvement. A few days later a Chinese doctor punctured the swollen part, and considerable pus escaped. Soon afterward the pain and swelling subsided, but ulceration began at the site of the puncture, and extended in each direction along the length of the clavicle, till both ends of the bone were exposed. Only a small strip of skin at the center held the bone in place.

The patient was well developed and well nourished, and gave negative physical findings except for the area of ulceration over the right clavicle, and the exposed ends of the bone.

The biceps, triceps and wrist reflexes on the right side were slightly exaggerated. Laboratory findings were negative except for the usual presence of ascarids and hookworm in the feces. A Wassermann test was not made.

Fig. 2.—Appearance of patient; arrows point to exposed ends of clavicle.

At operation, slight traction caused removal of the entire right clavicle. Within the ten months since the beginning of the disease a new clavicle had formed, very thick and in good position, the function of the arm being normal. Two weeks after operation, the ulcerations were greatly improved.

In our experience, this is a very unusual location for osteomyelitis, and osteomyelitis is one of the commonest diseases of Hainan.

Little reference literature is available in this part of China, but from what has been seen it would seem that this is a rare condition.

Christ Hospital.

PROCEEDINGS OF THE CHICAGO SESSION

MINUTES OF THE SEVENTY-FIFTH ANNUAL SESSION OF THE AMERICAN MEDICAL ASSOCIATION, HELD AT CHICAGO, JUNE 9-13, 1924

(Concluded from page 1973)

HOUSE OF DELEGATES

Third Meeting—Thursday Afternoon, June 12

The meeting was called to order at 2 o'clock by the Speaker.

Dr. J. D. Brook, Michigan, presented the final report of the Committee on Credentials and announced that 139 Delegates had had credentials approved and accepted, and moved that the list of delegates presented by the committee constitute the roll. The motion was carried.

The Secretary called the roll and announced a quorum present.

On motion of Dr. A. T. McCormack, Kentucky, seconded and carried, the reading of the minutes of the session of Tuesday, June 10, was dispensed with.

Election of Officers

Nominations for President-Elect were declared by the Speaker to be in order. The nominees were:

Dr. Rudolph Matas, Louisiana, nominated by Dr. W. H. Seemann, Louisiana; Dr. W. D. Haggard, Tennessee, nominated by Dr. J. A. Witherspoon, Tennessee; Dr. W. S. Thayer, Maryland, nominated by Dr. A. D. Dunn, Nebraska; Dr. Seale Harris, Alabama, nominated by Dr. S. W. Welch, Alabama.

The chairman of the Committee on Credentials announced that Dr. S. W. Johnston, delegate from Mississippi, had been in attendance throughout the session, but, because of a misunderstanding of conditions of registration, had failed to have his credentials properly approved. This had been done and Dr. Brook, chairman of the Committee on Credentials, moved that Dr. Johnston be seated as a delegate. This motion was seconded and carried.

The Speaker appointed as tellers Dr. A. E. Bulson, Indiana, Dr. Donald Macrae, Iowa, and Dr. S. P. Mengel, Pennsylvania.

There were 131 votes cast for President-Elect, of which Dr. Haggard received 80; Dr. Harris, 26; Dr. Matas, 17, and Dr. Thayer, 8. The Speaker declared that Dr. Haggard had received a majority of the votes cast, and on motion of Dr. A. W. Hornbogen, Michigan, Dr. W. D. Haggard was declared unanimously elected President-Elect.

For Vice President, Dr. E. B. McDaniel, Portland, Ore., was nominated by Dr. Joseph A. Pettit, Oregon. On motion of Dr. C. J. Whalen, Illinois, seconded and carried, nominations were closed and the unanimous vote of the House was cast by the Secretary for Dr. McDaniel, and he was declared elected Vice President.

Nominations for Secretary were called for, and Dr. Olin West was nominated by Dr. J. A. Witherspoon, Tennessee. On motion of Dr. A. E. Bulson, Indiana, seconded and carried, the unanimous ballot of the House was cast by the Speaker for Dr. West, and he was declared elected Secretary.

Dr. Austin A. Hayden, Chicago, was nominated for Treasurer by Dr. Wendell C. Phillips, chairman of the Board of Trustees. On motion of Dr. O. S. Wightman, New York, seconded and carried, the Secretary cast the vote of the House for Dr. Hayden, and he was declared elected Treasurer.

For Speaker of the House, Dr. Frederick C. Warnshuis, Michigan, was nominated by Dr. L. J. Hirschman, Section on Gastro-Enterology and Proctology. On motion of Dr. Irvin Abell, Kentucky, the nominations were closed and the unanimous vote of the House was cast by the Secretary for Dr. Warnshuis, and he was declared elected by the Vice Speaker in the Chair.

For Vice Speaker, Dr. H. M. Brown, Wisconsin, nominated Dr. Rock Sleyster, Wisconsin, whose election was declared after the Secretary had cast the vote of the House, on motion of Dr. A. E. Bulson, Indiana.

The President-Elect, Dr. W. D. Haggard, was escorted to the platform, introduced by the Speaker, and addressed the House.

Dr. E. B. McDaniel, the newly elected Vice President, was presented to the House.

Nominations for trustee for the term of four years were: Dr. J. H. Walsh, Illinois, and Dr. Ludvig Hektoen, Illinois, nominated by Drs. C. E. Humiston, Illinois, and Dr. D. J. Davis, Section on Pathology and Physiology, respectively. Dr. Frank Billings was nominated by Dr. A. T. McCormack, Kentucky, but declined the nomination.

Dr. J. H. Walsh received a majority of the votes cast, and his election was made unanimous on motion of Dr. Davis, seconded and carried.

Mrs. S. C. Red, President of the Woman's Auxiliary of the American Medical Association, addressed the House of Delegates.

For Trustee for the three-year term to succeed Dr. Phillips, Dr. Wendell C. Phillips was nominated by Dr. O. S. Wightman, New York, but withdrew his name; Dr. Edward B. Heckel, Pennsylvania, was nominated by Dr. W. F. Donaldson, Pennsylvania; Dr. Philip Marvel, Atlantic City, N. J., was nominated by Dr. John D. McLean, Pennsylvania. On the ballot, Dr. Heckel received a majority of the votes cast, and the election was made unanimous by motion of Dr. E. Eliot Harris, New York, seconded and carried.

The retiring President, Dr. Ray Lyman Wilbur addressed the House.

For Trustee for the three-year term to succeed Dr. Thomas McDavitt, Dr. McDavitt was reelected by unanimous vote of the House, his name having been proposed by Dr. J. L. Rothrock, Minnesota.

The President, Dr. W. A. Pusey, nominated Dr. M. L. Harris, Chicago, to succeed himself as a member of the Judicial Council; Dr. M. W. Ireland, U. S. Army, to succeed himself as a member of the Council on Medical Education and Hospitals, and Dr. F. P. Gengenbach, Denver, to succeed himself as a member of the Council on Scientific Assembly. The nominations were confirmed on motion of Dr. A. T. McCormack, Kentucky, regularly seconded and carried.

The President, Dr. W. A. Pusey, submitted a proposed amendment to Article VI, Section 1, of the Constitution, adding "President-Elect" to the list of general officers, which was referred by the Speaker to the Board of Trustees.

The secretary read lists of nominations for Affiliate and Associate Fellows, which were confirmed by the House, on motions regularly made, seconded and carried.

Place of 1925 Annual Session

Dr. Wendell C. Phillips, chairman of the Board of Trustees, reported invitations from three cities for the next Annual Session—St. Paul, Atlanta and Atlantic City, and referred the matter to the House for its preference.

The result of the balloting gave Atlanta 21 votes, Atlantic City 70 votes, and St. Paul 20 votes.

Dr. Frank Billings, retiring Trustee, was called for by the House of Delegates and addressed the House.

The Speaker called for reports of Reference Committees and for supplementary reports.

Supplementary Report of Board of Trustees

A supplementary report of the Board of Trustees was submitted by the chairman of the Board, Dr. Wendell C. Phillips, as follows:

The Board of Trustees reports to the House of Delegates that, by unanimous action, the following resolution has been passed:

That when Dr. George H. Simmons retires as Editor and General Manager, Dr. Olin West will become Acting General Manager; Dr. Morris Fishbein, Acting Editor of THE JOURNAL, and Mr. Will C. Braun, Acting Business Manager—all to serve until the next annual meeting of the Board on the first Friday of February, 1925.

Further, it is recommended to the House of Delegates of the American Medical Association by the Board of Trustees that a narcotic survey of the United States be made through the agency of the U. S. Public Health Service; and that until such time as the above-mentioned survey shall have been made, the House of Delegates look with disfavor on the publication at governmental expense and for general circulation, of a pamphlet on narcotic addiction based on uncertain statements and unproved data.

The Board of Trustees has adopted the resolution presented by Dr. George F. Keiper, Indiana, which was referred to the Board for action, requesting reciprocal relationship between the American Medical Association and the Canadian Medical Association for interchange of official delegates at annual meetings, and Dr. Olin West was selected as the first official delegate from the American Medical Association to the Canadian Medical Association.

The report of the Board of Trustees was adopted.

Report of Committee on Rules and Order of Business

Dr. H. P. Linsz, West Virginia, chairman of the Committee on Rules and Order of Business, made the following report, which was adopted:

Your Committee on Rules and Order of Business took up the communication from Theodore Hough, dean of the University of Virginia, submitted by Dr. Southgate Leigh relative to the annual session dates of the American Medical Association conflicting with commencement exercises of medical colleges in general, thereby preventing the attendance of their teachers at such session. Your committee respectfully recommends to the Board of Trustees that this condition be remedied as far as feasible.

Your committee also urges that the date of the next annual session of the American Medical Association be set by the Board of Trustees within sixty days following the closing date of each annual session, in order that the state associations may arrange for their next annual meetings by September 1, following.

HENRI P. LINSZ, West Virginia, Chairman.
F. T. KIDDER, Vermont.
E. A. HINES, South Carolina.
E. A. PRAY, North Dakota.
W. P. EAGLETON, New Jersey.

Report of Reference Committee on Medical Education

The chairman of the Committee on Medical Education, Dr. F. B. Lund, Massachusetts, submitted the following report, which was adopted by the House:

Your committee, to which has been referred the communication of Dr. Franklin Martin regarding the Gorgas Memorial, would recommend the passage of the following resolution:

Resolved, That the House of Delegates of the American Medical Association, convinced of the great promise which the Gorgas Memorial contains of benefit to humanity through improved knowledge of preventive medicine and tropical disease, and of its peculiar adequacy as a tribute to our great leader and sanitarian, recommend to the organized profession of the country, through its constituent state and county societies, the enthusiastic support of the project.

J. A. WITHERSPOON, Tennessee.
JOSEPH RILUS EASTMAN, Indiana.
THOMAS CULLEN, Maryland.
W. H. MAYER, Pennsylvania.
F. B. LUND, Massachusetts, Chairman.

Report of Committee on Reapportionment of Delegates

The report of the Committee on Reapportionment of Delegates was presented by the Secretary, as follows, and was adopted:

The provisions of the Constitution and By-Laws of the Association concerning reapportionment of Delegates are as follows:

CHAPTER I, SECTION 3, OF BY-LAWS

APPORTIONMENT OF DELEGATES.—At the annual session of 1903, and every third year thereafter, the House of Delegates shall appoint a committee of five on reapportionment, of which the Speaker and the Secretary shall be members. The committee shall apportion the delegates among the constituent associations in accordance with Article 5, Section 3, of the Constitution, and in proportion to the membership of each constituent association as recorded in the office of the Secretary of the American Medical Association on April 1 of the year in which the apportionment is made. This apportionment shall take effect at the next succeeding annual session, and shall prevail until the next triennial apportionment, whether the membership of the constituent association shall increase or decrease.

ARTICLE 5, SECTION 3, OF CONSTITUTION

The total voting membership of the House of Delegates shall not exceed 150. The medical departments of the Army and of the Navy, and the United States Public Health Service and the scientific sections shall each be entitled to one delegate, and the remainder shall be apportioned among the constituent associations in proportion to their actual active membership as hereinafter provided in the By-Laws.

Since each scientific section and the medical departments of the Army and the Navy, and the United States Public Health Service are each represented by one delegate, there being fifteen regularly established sections and three government services, a total of 132 delegates can be apportioned among the fifty-four constituent associations.

At the Boston session, 1921, the reapportionment of delegates was effected on the basis of one delegate for each 850 members or fraction thereof. The total membership of the Association at that time was 84,971. April 1, 1924, the total membership was 90,056. It is manifest that the figure used as the basis of apportionment this year must be considerably larger than that used at Boston, since the membership of the House of Delegates is definitely fixed at 150 in the Constitution, and cannot be changed this year.

The accompanying table shows the number of members in each constituent association as recorded in the office of the Secretary, April 1, 1924, and the number of delegates for each association on the basis of one delegate for 850 members, one for 900, and one for 950 members. It will be seen that apportionment on the basis of one delegate for each 850 members will produce a number in excess of the constitutional limit of the number of delegates, as will also be the result if 900 members is used as the basic figure. By using 950 as the basis of calculation, 128 delegates can be apportioned among the constituent associations, and thus the total voting membership of the House will be made 146. The present membership of the House, under the Boston apportionment, is a possible 149.

If 950 is used as the basic number in determining the apportionment to be made at this session, California and Minnesota will gain one delegate each, while Illinois, Pennsylvania, Tennessee, Texas and Virginia will lose one delegate each. The same losses and gains would be effected on any lower calculations, except such as would produce a total membership of the House larger than that specifically designated in the constitution.

The House of Delegates may wish to consider an amendment to the constitution to provide for a larger voting membership than is now specified in Section 3, Article 5, of the Constitution. An amendment of that nature proposed at this session would have to lie over until next year and could not become effective until 1927 unless the By-Laws are also amended with respect to the present provisions relative to the triennial period for reapportionment. In considering this matter, it may be well to remember that the membership of the Association, April 1, 1924, was larger than ever before; of course, none can say whether it can be maintained or increased or whether there will be a more or less marked reduction next year and in future years. If, for any reason, any considerable gain or loss should occur, it might become necessary then to secure still another change in the provisions

of the By-Laws in order to insure fair representation. It appears to be reasonable to expect that there will be no marked reduction in the membership of the Association, however, and this committee believes that to have a larger voting membership in the House of Delegates would tend to maintain and even to enhance the democratic spirit and purpose of the Association. Many Fellows have expressed themselves as believing that the membership of the House should be made larger. Those who oppose hold that to increase the number of voting members will be to make the size of the House unwieldy.

Number of Members in Constituent Associations, and Number of Delegates on Different Bases

State	Number of Members	Basis of Apportionments and Number of Delegates 850	900	950	Increase on Basis of 950	Decrease on Basis of 950
Alabama	1,682	2	2	2		
Arizona	225	1	1	1		
Arkansas	1,197	2	2	2		
California	3,929	5	5	5	1	
Colorado	1,020	2	2	2		
Connecticut	1,160	2	2	2		
Delaware	147	1	1	1		
District of Columbia	556	1	1	1		
Florida	514	1	1	1		
Georgia	1,716	3	2	2		
Idaho	360	1	1	1		
Illinois	6,653	8	8	8		1
Indiana	2,735	4	4	3		
Iowa	2,458	3	3	3		
Kansas	1,640	2	2	2		
Kentucky	1,969	3	3	3		
Louisiana	1,169	2	2	2		
Maine	767	1	1	1		
Maryland	1,231	2	2	2		
Massachusetts	4,078	5	5	5		
Michigan	3,181	4	4	4		
Minnesota	2,042	3	3	3	1	
Mississippi	1,034	2	2	2		
Missouri	3,292	4	4	4		
Montana	303	1	1	1		
Nebraska	1,239	2	2	2		
Nevada	115	1	1	1		
New Hampshire	499	1	1	1		
New Jersey	2,092	3	3	3		
New Mexico	201	1	1	1		
New York	10,087	12	12	11		
North Carolina	1,656	2	2	2		
North Dakota	385	1	1	1		
Ohio	4,759	6	6	6		
Oklahoma	1,539	2	2	2		
Oregon	889	1	1	1		
Pennsylvania	7,433	9	9	8		1
Rhode Island	399	1	1	1		
South Carolina	916	2	2	1		
South Dakota	356	1	1	1		
Tennessee	1,711	3	2	2		1
Texas	3,650	5	5	4		1
Utah	356	1	1	1		
Vermont	389	1	1	1		
Virginia	1,843	3	3	2		1
Washington	1,122	2	2	2		
West Virginia	1,142	2	2	2		
Wisconsin	1,914	3	3	3		
Wyoming	163	1	1	1		
Alaska		1	1	1		
Hawaii		1	1	1		
Isthmian Canal Zone		1	1	1		
Philippine Islands		1	1	1		
Porto Rico		1	1	1		
United States Army		1	1	1		
United States Navy		1	1	1		
United States Public Health Service		1	1	1		
Fifteen sections		15	15	15		
Totals		154	152	146	2	5

The committee recommends:

1. That the reapportionment of delegates be effected on the basis of one delegate for each 950 members or fraction thereof for all constituent associations having a recorded membership of 950 or more. Under the provisions of the By-Laws, each constituent association with smaller membership is, of course, entitled to one delegate.

2. That the Constitution be amended at the next annual session as follows:

Amend Section 3, Article 5, of the Constitution by substituting the figures 175 for the figures "150" in the second line of said section, so that the first sentence in this section shall read:

The total voting membership of the House of Delegates shall not exceed 175.

3. That the By-Laws be amended at the next annual session as follows:

Amend Section 3, Chapter 1, of the By-Laws by substituting 1925 for "1903" in the second line of that section, so that the first sentence of Section 3, Chapter 1, of the By-Laws shall read:

At the annual session of 1925, and every third year thereafter, the House of Delegates shall appoint a committee of five on reapportionment, of which the Speaker and the Secretary shall be members.

F. C. WARNSHUIS, Chairman.
T. C. CHALMERS.
E. M. NEHER.
A. T. MCCORMACK.
OLIN WEST.

On motion of Dr. Irvin Abell, Kentucky, the report was adopted as read.

Supplementary Report of Judicial Council

Dr. M. L. Harris, Chairman, presented a supplementary report of the Judicial Council.

The Judicial Council has considered the resolution offered by Dr. John D. McLean, Pennsylvania, as follows:

Resolved, That the practice of medicine for a definite amount per day, month or year with an indefinite service is against the Principles of Medical Ethics as defined by the American Medical Association.

The Council recommends that this resolution be not approved.

The recommendation of the Council was adopted.

Supplementary Report of Reference Committee on Hygiene and Public Health

The following supplementary report of the Reference Committee on Hygiene and Public Health was presented by its chairman, Dr. J. W. Kerr, United States Public Health Service:

Your committee has to report on two remaining matters referred to it:

1. In returning the communication submitted by Dr. Southgate Leigh on behalf of the Medical and Surgical Section of the American Railway Association, it is respectfully recommended that approval be granted for the publication by the American Medical Association of the report of the Special Committee on Traumatic and Industrial Hernia submitted by Dr. Leigh, and it is suggested that the report be given such consideration by the Board of Trustees as is deemed pertinent.

2. With respect to the correspondence had between the President of the American Medical Association and the president of the National Narcotic Education Association, it is understood this matter has already been in the hands of the Board of Trustees. The correspondence is accordingly returned without recommendation.

J. W. KERR, Chairman.

The report of the committee was adopted.

Supplementary Report of Reference Committee on Legislation and Public Relations

A supplementary report of the Reference Committee on Legislation and Public Relations was submitted by Dr. Joseph A. Pettit, Chairman, as follows:

The following resolution was introduced by Dr. John D. McLean, Pennsylvania, June 10:

WHEREAS, The honor and integrity of the medical profession are being discredited by the unnecessary, unprofessional and unlawful prescribing of alcoholic liquors by some unscrupulous physicians; be it

Resolved, That in the judgment of the House of Delegates of the American Medical Association, in session assembled, every state and county medical association should use their best endeavor to discipline physicians who either negligently or wilfully prescribe alcoholic liquors otherwise than in accordance with the law, and to purge the medical profession of physicians who wilfully, under the cloak of their profession, prescribe alcoholic liquors for other than medicinal purposes; and

Resolved, further, That the Secretary of this Association forward a copy of this resolution to the federal prohibition officer in Washington and to every state prohibition officer of the United States with a request for their cooperation.

Your reference committee recommends that the House of Delegates approve this resolution.

The following resolution was introduced by Dr. T. C. Edwards, California, June 10:

WHEREAS, It is extremely important that constituent state societies be kept in touch with decisions involving cases of alleged malpractice; be it

Resolved, That the Bureau of Legal Medicine and Legislation of the American Medical Association be asked to make and furnish a copy of these decisions to the office of constituent state societies for use by their attorneys.

Your reference committee recommends that the House of Delegates approve this resolution.

The report was discussed by Drs. Wendell C. Phillips, J. W. Van Derslice and T. C. Edwards, and on motion of Dr. Van Derslice the recommendation of the committee was amended to provide for reference of the resolution of Dr. T. C. Edwards, California, to the Board of Trustees.

The report of the Committee on Legislation and Public Relations as amended was adopted.

Supplementary Report of Reference Committee on Reports of Officers

A supplementary report of the Committee on Reports of Officers was submitted by Dr. Holman Taylor, Chairman, and was adopted by the House:

The extemporaneous address of President Wilbur has been referred to this committee. The address has been carefully considered, and the committee begs to commend it most highly. It deals with two problems of supreme importance, both to the medical profession and to the public it serves. Truly, "Great forces are stirring in every part of society," and medical and public health problems are seriously involved. As pointed out by the President, it remains to be seen whether the medical profession will secure to itself the leadership in the advances and extensions that are being made, as the telephone companies appear to have done, or whether it will remain behind the times and expend its energies in vainly attempting to stem the tide, as the railroad companies evidently have done. We treasure individualism in medicine, and if our high purposes are to be carried out and ideals realized, there must never be bureaucracy in medicine, nor must there be interposed between the physician and those whom he would serve any intermediator whatsoever. In this particular we beg to quote the words of the President:

"The fund of information is there. We stand between that information and the public. It is our problem to provide for its distribution. If we make those provisions wisely, if we meet the situation, then we will retain the mastery; if we fail, education has reached such a level that others will begin to demand that there be a distribution of this information available to the human race and we will lose our position of mastery. I have confidence that we will maintain it."

Report of Reference Committee on Miscellaneous Business

Dr. H. P. Beirne, chairman of the Reference Committee on Miscellaneous Business, submitted the following report, which was adopted by the House:

The following communication was referred to the Reference Committee on Miscellaneous Business:

ALTADENA, CALIF., May 27, 1924.

To the President and Members of the House of Delegates of the American Medical Association, Chicago, Illinois:

Gentlemen:—It would be an appreciated courtesy if you will recommend to the Association the creation of an auxiliary membership to include physicians in good standing, who have retired from practice but are interested to the extent of paying the dues; such an affiliation to permit them to attend the meetings, read papers and take part in the discussions, but not to vote.

Such a membership would keep alive the smoldering embers on the altar of Esculapius, and fan them into a glow that would light the pathway of the old physician adown his shortening corridor of time.

J. E. MINNEY, M.D.

Your committee does not feel that there is any urgent necessity for making a change in procedure, or in granting this request; so we recommend that the request be not granted.

H. P. BEIRNE, Chairman.
W. R. BATHURST.

Dr. J. R. Kevin, New York, rising to a point of information, asked to know what had become of a resolution introduced by him and referred to the Committee on Hygiene and Public Health and not yet reported on. The Secretary stated that this resolution had been properly transmitted to the committee. Dr. J. W. Kerr, Chairman, asked that the committee be given opportunity to find the resolution and report.

Dr. A. E. Bulson, Indiana, chairman of the special committee appointed by the Speaker to prepare resolutions on the death and services of William Whitford, requested that further time be given the committee to prepare resolutions which should be spread on the minutes of the House. The request was granted by the House.

Dr. J. E. Lane, Council on Scientific Assembly, made a statement relative to section meetings and arragements for the Scientific Assembly.

Dr. H. M. Brown, Wisconsin, asked unanimous consent of the House for the nomination of Dr. Fielding H. Garrison, for the relation of Associate Fellow. Consent was granted by the House and Dr. Brown nominated and moved the election of Fielding H. Garrison as Associate Fellow. Dr. Garrison was unanimously elected.

Resolution on Trachoma Work Among Indians

Dr. Cassius D. Wescott, Section on Ophthalmology, presented the following resolution, which was adopted:

The Indian Bureau plans intensive work in one of the Southwestern states for the cure of Indian patients suffering from trachoma, and the restriction of the disease among the Indians. Operations will be conducted by the field force of the Indian Bureau, in conjunction with the United States Public Health Service and the state health department. The planning of the campaign, the directing and supervising of its conduct, and the evaluation of the results demand the best the medical profession of the country can afford in the way of knowledge, experience and expert advice. It is suggested, therefore, that the Board of Trustees be authorized by the House of Delegates to tender to the Secretary of the Interior and to the Commissioner of Indian Affairs the services of an expert advisory medical committee, and in event of the acceptance of the tender, to appoint such a committee. To the end named, the following resolution is offered:

WHEREAS, The Section on Ophthalmology is advised that the Secretary of the Interior is about to undertake through the Commissioner of Indian Affairs an intensive campaign to check the ravages of trachoma among certain Indian tribes and to relieve suffering therefrom; and

WHEREAS, The problem is one calling for the best ophthalmologic knowledge, experience and advice; be it

Resolved, That the Section on Ophthalmology recommend to the House of Delegates that the Board of Trustees be authorized and requested to tender to the Secretary of the Interior and the Commissioner of Indian Affairs the services of a medical advisory committee to cooperate with the Indian Bureau in its efforts to reduce the prevalence of trachoma among the Indian tribes and to relieve patients suffering from that disease; and that the Board be further authorized and requested, in event of the acceptance of its offer, to appoint such a committee. Also be it

Resolved, That if this resolution is adopted by the House of Delegates, the Executive Committee of the Section on Ophthalmology be authorized to suggest men for such a committee, if asked.

Supplementary Report of Committee on Hygiene and Public Health Reference

Dr. J. W. Kerr, chairman of the Reference Committee on Hygiene and Public Health, presented a supplementary report of that committee, as follows:

The Reference Committee on Hygiene and Public Health has considered the following resolution, introduced by Dr. J. Richard Kevin, New York, and moves its adoption:

WHEREAS, The American Medical Association is in sympathy with, and has officially approved, periodic medical examinations of apparently healthy persons; and

WHEREAS, Physicians generally require some concrete formulas and suggestions by which such health examinations can be effectively accomplished; and

WHEREAS, Such assistance can be best provided by a properly prepared manual compiled from existing experience in this field of medical practice; therefore, be it

Resolved, That the House of Delegates direct the Board of Trustees to cause such a manual to be published immediately and made available to all physicians.

After discussion by Dr. A. J. Bedell, New York, J. W. Van Derslice, Illinois, Dr. Southgate Leigh, Virginia, and Dr. J. R. Kevin, New York, on motion of Dr. J. W. Van Derslice, Illinois, the recommendation of the committee was amended to refer the resolution of Dr. Kevin to the Board of Trustees.

Proposed Amendment to By-Laws

Dr. G. E. Follansbee, Ohio, presented the following proposed amendment to Chapter 4, Section 1, Page 9, of the By-Laws:

To insert after the first sentence:

At some time between the first and fourth day of the Annual Session of the House of Delegates, the chairmen and the secretaries of the various sections of the Scientific Assembly and the members of the Council on Scientific Assembly shall meet at the call of the chairman of the Council on Scientific Assembly and shall prepare and present to the House of Delegates at their meeting on the fourth day of the annual session of the House of Delegates three nominees for the office of President-Elect and two nominees for the office of Vice President, and the nominees so presented shall be the only ones eligible for election.

The Speaker ruled that the proposed amendment shall be considered at the next annual session of the House of Delegates.

Supplementary Report of Board of Trustees

The Secretary presented the supplementary report of the Board of Trustees as follows:

The Board of Trustees has considered the resolution introduced by the President, Dr. W. A. Pusey, providing for an amendment to Section 1 of Article VI of the Constitution for the insertion of the words, "a President-Elect." The effect of the proposed amendment will be to make the President-Elect a general officer of the Association. The Board of Trustees recommends the adoption of such amendment.

The Speaker ruled that the report of the Board of Trustees would be received as notice of amendment to the Constitution and that under the rules will lie over until the next annual session.

Resolution from Section on Preventive and Industrial Medicine and Public Health

The Secretary presented a communication from the Section on Preventive and Industrial Medicine and Public Health as follows:

Resolved, That it is the sense of the Section on Preventive and Industrial Medicine and Public Health that the use of water by a municipality for the purposes of drinking, sanitation and the preservation of health is more important for social welfare than is any other purpose to which water can be put, and, therefore, should take precedence in law and in custom over all other demands for water; and be it

Resolved, That a high disease and death rate from typhoid fever and other diseases due to the use of polluted water by the people of any municipality through carriers and otherwise would imperil the country at large.

W. S. LEATHERS, Chairman.
W. F. DRAPER, Secretary.

On motion of Dr. J. W. Van Derslice, Illinois, the resolution presented in this communication was adopted by the House.

The Secretary read a telegram from Dr. W. E. Musgrave, retiring Vice-President, and a telegram from the Cuban embassy, advising the House of the designation of Dr. Octavio Montoro as a representative of the Cuban government at the annual session of the Association.

CONCLUDING MOTIONS

On motion of Dr. Albert Soiland, California, a rising vote of thanks was tendered by the House to the officers of the American Medical Association, to the Local Committee on Arrangements and to its subcommittees, to the headquarters' staff of the American Medical Association, and to the Speaker of the House for their efforts to make and to carry out arrangements which had contributed so much to the success of the Seventy-Fifth Annual Session. The motion of Dr. Soiland was adopted by a rising vote.

On motion of Dr. D. E. Sullivan, New Hampshire, the House of Delegates by a rising vote expressed its appreciation of the long and valuable services of Dr. Frank Billings, retiring trustee, and its best wishes for a long, prosperous and happy life for Dr. Billings.

The Speaker congratulated the House on the splendid manner in which its members had conducted the business that had come before the House, and expressed his appreciation for the cooperation and kindness he had received at the hands of members of the House.

On motion of Dr. J. A. Pettit, Oregon, the House by a rising vote extended its thanks to the Speaker, Dr. F. C. Warnshuis, for the fairness and precision with which he had directed the business of the House as its Speaker.

There being no further business to come before the House, the Speaker declared the House of Delegates adjourned sine die.

MINUTES OF THE SECTIONS

SECTION ON PRACTICE OF MEDICINE

WEDNESDAY, JUNE 11—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Joseph A. Capps, Chicago.

Dr. F. M. Pottenger, Monrovia, Calif., read a paper on "What Has Been Accomplished in Twenty Years of Sanatorium Study and Treatment of Tuberculosis." Discussed by Drs. J. M. Anders, Philadelphia, and F. M. Pottenger, Monrovia, Calif.

Dr. William S. Thayer, Baltimore, read a paper on "The Cardiac Manifestations of Rheumatic Fever." Discussed by Drs. Emanuel Libman, New York; S. A. Walkowiak, Detroit; E. S. Kilgore, San Francisco; C. D. Christie, Cleveland, and William S. Thayer, Baltimore.

The President, Dr. William Allen Pusey, and the retiring President, Dr. Ray Lyman Wilbur, addressed the section.

Dr. J. M. Anders, Philadelphia, read a paper on "Indications for, and Methods of, Administering Hydrotherapy." Discussed by Dr. Mary Freeman, Perrine, Fla.

Dr. L. G. Rowntree, Rochester, Minn., read a paper on "Studies in Diabetes Insipidus." No discussion.

Drs. Clarence Gamble, Philadelphia, and Richard C. Cabot, Boston, presented a paper on "The Electric Stethoscope and Electrical Filters as Aids to Diagnosis." No discussion.

Dr. Seale Harris, Birmingham, Ala., read a paper on "Hyperinsulinism: Preliminary Report."

Dr. Russell M. Wilder, Rochester, Minn., read a paper on "'Optimal' Diabetic Diets."

Dr. Elliott P. Joslin, Boston, read a paper on "The Present Problem in Diabetes."

These three papers were discussed by Prof. Karl Petren, Lund, Sweden, and W. M. Boothby, Rochester, Minn.; Don H. Duffie, Central Lake, Mich.; S. B. McKerrihan, Portsmouth, Ohio; R. Logefeil, Minneapolis; Seale Harris, Birmingham, Ala.; R. M. Wilder, Rochester, Minn., and E. P. Joslin, Boston.

THURSDAY, JUNE 12—AFTERNOON

Dr. Joseph A. Capps, Chicago, read the chairman's address, entitled: "Irrational Tendencies in Modern Therapy."

Dr. V. P. Sydenstricker, Augusta, Ga., read a paper on "Further Observation on Sickle Cell Anemia." Discussed by Drs. J. B. Herrick, Chicago; W. A. Mulherin, Augusta, Ga.; V. E. Emmel, Chicago, and V. P. Sydenstricker, Augusta, Ga.

Dr. Russell L. Haden, Kansas City, Mo., read a paper on "The Value of Volume Index in the Diagnosis of Pernicious Anemia." Discussed by Drs. H. C. Giffin, Rochester, Minn.; Joseph A. Capps, Chicago, and R. L. Haden, Kansas City, Mo.

Drs. John M. Blackford and M. F. Dwyer, Seattle, presented a paper on "Causes of Dyspepsia." Discussed by Drs. G. B. Eusterman, Rochester, Minn.; Ludwig Aschoff, Freiburg, Germany; Robert T. Morris, New York, and John M. Blackford, Seattle.

Dr. George F. Dick, Chicago, read a paper on "The Prevention of Scarlet Fever." Discussed by Dr. Abraham Zingher, New York.

Dr. Myer Solis Cohen, Philadelphia, read a paper on "Visceral Disease Due to Bacterial Infection of an Apparently Normal Upper Respiratory Tract." No discussion.

Dr. J. A. Bargen, Rochester, Minn., read a paper on "Experimental Studies on the Etiology of Chronic Ulcerative Colitis." Discussed by Dr. E. C. Rosenow, Rochester, Minn.

FRIDAY, JUNE 13—AFTERNOON

The following officers were elected: chairman, Dr. Elliott P. Joslin, Boston; vice chairman, Dr. H. C. Giffin, Rochester, Minn.; secretary, Dr. Eugene S. Kilgore, San Francisco.

Dr. Alfred Friedlander, Cincinnati, read a paper on "Clinical Types of Hypotension." No discussion.

Dr. Ralph H. Major, Kansas City, Kan., read a paper on "Relationship Between Certain Products of Metabolism and Arterial Hypertension." Discussed by Drs. Joseph L. Miller, Chicago; Solomon Strouse, Chicago, and Ralph H. Major, Kansas City, Kan.

Drs. James E. Talley and Walter H. Lindsey, Philadelphia, presented a paper on "Splenic Enlargement in Chronic Cardiac Disease." Discussed by Dr. Robert B. Preble, Chicago.

Dr. Burton E. Hamilton, Boston, read a paper on "Heart Failure of the Congestive Type Resulting from Hyperthyroidism." Discussed by Drs. W. M. Boothby, Rochester, Minn.; F. H. Lahey, Boston, and B. E. Hamilton, Boston.

Dr. Paul D. White, Boston, read a paper on "The Incidence of Rheumatic Fever, Chorea and Rheumatic Heart Disease, with Especial Reference to Its Occurrence in Families." Discussed by Drs. May G. Wilson, New York, and Paul D. White, Boston.

Dr. James S. McLester, Birmingham, Ala., read a paper on "The Principles Involved in the Treatment of Obesity." No discussion.

SECTION ON SURGERY, GENERAL AND ABDOMINAL

WEDNESDAY, JUNE 11—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. Urban Maes, New Orleans.

Dr. M. E. Blahd, Cleveland, read a paper on "Regional Anesthesia: Its Use in General Surgery."

Dr. Robert Emmett Farr, Minneapolis, read a paper on "A Method of Obtaining Anterior Sympathetic Anesthesia in Abdominal Surgery."

These two papers were discussed by Drs. W. T. Coughlin, St. Louis; Carl Beck, Chicago; M. E. Blahd, Cleveland, and Robert Emmett Farr, Minneapolis.

Dr. W. O. Sweek, Phoenix, Ariz., read a paper on "Oxids of Nitrogen in Wound Infections." Discussed by Dr. Warner W. Watkins, Phoenix, Ariz.

Dr. Willias C. Campbell, Memphis, Tenn., read a paper on "Mobilization of Joints with Bony Ankylosis: An Analysis of One Hundred Cases." Discussed by Drs. M. S. Henderson, Rochester, Minn.; Edwin W. Ryerson, Chicago; Kellogg Speed, Chicago; C. H. Magee, Burlington, Iowa, and Willis C. Campbell, Memphis, Tenn.

Dr. John B. Deaver, Philadelphia, read a paper on "Cholecystectomy Versus Cholecystostomy." Discussed by Drs. Stanley Reinmann, Philadelphia; J. Earl Else, Portland, Ore.; and Florus F. Lawrence, Columbus, Ohio.

Dr. Francis R. Holbrook, Des Moines, Iowa, read a paper on "the Diagnosis and Management of Head Injuries." Discussed by Drs. F. A. Besley, Chicago; Kellogg Speed, Chicago; George W. Swift, Seattle; M. E. Blahd, Cleveland, and Francis R. Holbrook, Des Moines, Iowa.

Dr. Clarence A. McWilliams, New York, read a paper on "Suggestions as to the Treatment of Total Avulsion of the Scalp, with Remarks on Skin Grafting."

Dr. William T. Coughlin, St. Louis, read a paper on "The Repair of Defects about the Chin from the Standpoint of a General Surgeon."

These two papers were discussed by Drs. Harry P. Ritchie, St. Paul, and G. V. I. Brown, Milwaukee.

The President, Dr. William Allen Pusey, and the retiring President, Dr. Ray Lyman Wilbur, and the speaker of the House, Dr. F. C. Warnshuis, addressed the section.

THURSDAY, JUNE 12—MORNING

The meeting was called to order at 9 o'clock by the chairman.

Dr. Urban Maes, New Orleans, read the chairman's address, entitled "Some Suggested Reforms in the Medical Curriculum."

Dr. W. L. Brown, El Paso, Texas, read a paper on "Further Observations on the Treatment of Postoperative Vomiting, Distention, and Peritonitis by Continued Drainage and Lavage with the Duodenal Tube and Massive Hot Applications." Discussed by Drs. Moses Behrend, Philadelphia; Thomas G. Orr, Kansas City, Mo.; Rudolph Matas, New Orleans, and W. L. Brown, El Paso, Texas.

Dr. Marshall Clinton, Buffalo, read a paper on "Subcostal Neuritis as a Cause of Abdominal Pain." Discussed by Drs. Lewis H. McKinnie, Colorado Springs, Colo.; A. J. Carlson, Chicago; W. R. Cubbins, Chicago, and Marshall Clinton, Buffalo.

Dr. Percival Bailey, Boston, read a paper on "Hypophysial Adenomas."

Dr. George W. Crile, Cleveland, read a paper on "Thyroid Gland."

Dr. William J. Mayo, Rochester, Minn., read a paper on "Certain Blood Dyscrasias Dependent on Pathologic Condition of Spleen."

These three papers were discussed by Drs. A. J. Carlson, Chicago; J. L. Yates, Milwaukee; W. D. Haggard, Nashville, Tenn.; E. M. Hanrahan, Jr., Baltimore; Frank H. Lahey, Boston; J. M. Blackford, Seattle; Percival Bailey, Boston; George W. Crile, Cleveland, and William J. Mayo, Rochester, Minn.

FRIDAY, JUNE 13—MORNING

The meeting was called to order at 9 o'clock by the chairman.

The following officers were elected: chairman, Dr. Evarts A. Graham, St. Louis; vice chairman, Dr. Vernon C. David, Chicago; secretary, J. Tate Mason, Seattle; delegate, Dr. Carl B. Davis, Chicago; alternate, Dr. F. W. Bancroft, New York.

Dr. William Francis Rienhoff, Jr., Baltimore, read a paper on "Congenital Arteriovenous Fistula: Discussion of Etiology and Operative Treatment, with Report of a Case."

Dr. Mont R. Reid, Cincinnati, read a paper on "Five Cases of Subclavian Arteriovenous Aneurysm."

These two papers were discussed by Drs. Barney Brooks, St. Louis; Rudolph Matas, New Orleans; W. F. Reinhoff, Jr., Baltimore, and Mont R. Reid, Cincinnati.

Dr. Edwin I. Bartlett, San Francisco, read a paper on "The Treatment of Blue Dome Cyst." Discussed by Drs. William C. MacCarty, Rochester, Minn.; Frank E. Adair, New York, and Edwin I. Bartlett, San Francisco.

Dr. Fred W. Rankin, Louisville, Ky., read a paper on "Choice of Operation in Cancer of the Colon, Not Including the Rectum." Discussed by Drs. E. Starr Judd, Rochester, Minn.; Arthur D. Bevan, Chicago; Carl B. Davis, Chicago, and Fred W. Rankin, Louisville, Ky.

Dr. Donald C. Balfour, Rochester, Minn., read a paper on "The Case Against Gastro-Enterostomy." Discussed by Drs. J. Shelton Horsley, Richmond, Va.; B. W. Sippy, Chicago; Alfred A. Strauss, Chicago; R. T. Morris, New York; C. H. Mayo, Rochester, Minn.; Willard Bartlett, St. Louis; W. D. Haggard, Nashville, Tenn., and Donald C. Balfour, Rochester, Minn.

The President-Elect, Dr. W. D. Haggard, addressed the section.

SECTION ON OBSTETRICS, GYNECOLOGY AND ABDOMINAL SURGERY

WEDNESDAY, JUNE 11—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Frank W. Lynch, San Francisco.

Dr. L. E. Phaneuf, Boston, read a paper on "Intraperitoneal Hemorrhage from Ruptured Ovarian Cyst."

Dr. Alice Maxwell, San Francisco, read a paper on "The Fate and Function of Ovaries After Hysterectomy."

These two papers were discussed by Drs. Emil Ries, Chicago; Carey Culbertson, Chicago; Emil Novak, Baltimore; Arthur H. Curtis, Chicago; Henry T. Byford, Chicago; L. E. Phaneuf, Boston, and Alice Maxwell, San Francisco.

Drs. Emil Novak and R. W. TeLinde, Baltimore, presented a paper on "The Endometrium of the Menstruating Uterus." Discussed by Prof. George W. Bartelemey, Chicago, and Dr. Emil Novak, Baltimore.

Drs. L. A. Pomeroy and Abraham Strauss, Cleveland, presented a paper on "A Review of One Hundred Cases of Carcinoma of the Cervix, with Special Reference to the Predominating Type of Cell."

Dr. J. F. Percy, Los Angeles, read a paper on "Cautery Knife Excision of the Malignant Uterus: Technic and Results."

Drs. Harold C. Bailey and William P. Healy, New York, presented a paper on "Methods of Treatment and Results in One Thousand and Twenty-four Cases of Cancer of the Uterine Cervix, Treated by Radium and Roentgen Ray."

Dr. Louisa Martindale, London, England, read a paper on "The Treatment of Fibromyomas of the Uterus and Other Causes of Menorrhagia by Intensive Roentgen-Ray Therapy, with Especial Reference to the Possible Complication of Malignant Disease."

These four papers were discussed by Drs. George Gray Ward, New York; Arthur H. Curtis, Chicago; Abraham Strauss, Cleveland; J. F. Percy, Los Angeles; W. P. Healy, New York, and Louisa Martindale, London, England.

Dr. Arthur H. Curtis moved that a vote of thanks be given to Dr. Martindale for her courtesy in coming here and for her very interesting paper. Seconded and carried.

The chairman appointed Drs. George Gray Ward, New York; Arthur H. Curtis, Chicago, and Carey Culbertson, Chicago, to serve as the Executive Committee.

The President, Dr. William Allen Pusey, and the retiring President, Dr. Ray Lyman Wilbur, addressed the section.

THURSDAY, JUNE 12—AFTERNOON

The meeting was called to order at 2 o'clock by the secretary, Dr. Carl Henry Davis, Milwaukee.

Dr. Frank W. Lynch, San Francisco, read the chairman's address.

Drs. Joseph J. Mundell and Charles W. O. Bunker, Washington, D. C., presented a paper on "The Value of Blood Chemistry in Pregnancy." Discussed by Drs. J. P. Greenhill, Chicago, and Joseph J. Mundell, Washington, D. C.

Drs. R. A. Bartholomew and G. B. Adams, Atlanta, Ga., presented a paper on "Syphilis as a Complication of Pregnancy in the Negro; Analysis of Three Hundred Cases; Results of Antisyphilitic Treatment; the Dark Field Illumination as an Aid in the Diagnosis of Fetal Syphilis at Necropsy." Discussed by Dr. R. A. Bartholomew, Atlanta, Ga.

Dr. A. C. Beck, Brooklyn, read a paper on "The Abdominal Binder as a Substitute for Pituitary Extract in the Second Stage of Labor." Discussed by Drs. Bertha Van Hoosen, Chicago; J. P. Gardiner, Toledo, Ohio; C. Lee Graber, Cleveland, and A. C. Beck, Brooklyn.

Drs. Reuben Peterson and Norman F. Miller, Ann Arbor, Mich., presented a paper on "Thymus of the New-Born and Its Significance to the Obstetrician." No discussion.

Dr. C. H. Mayo, Rochester, Minn., read a paper on "The Appendix in Relation to or as the Cause of Other Abdominal Diseases."

Dr. Donald Macomber, Boston, read a paper on "The Prevention of Sterility."

Dr. W. L. Estes, Jr., Bethlehem, Pa., read a paper on "Further Results with Ovarian Implantation as Distinguished from Transplantation." Discussed by Drs. Joseph B. DeLee, Chicago; Rudolph W. Holmes, Chicago; Robert T. Morris, New York; F. F. Lawrence, Columbus, Ohio; C. H. Mayo, Rochester, Minn.; Donald Macomber, Boston, and W. L. Estes, Jr., Bethlehem, Pa.

FRIDAY, JUNE 13—AFTERNOON

The meeting was called to order at 2:10 by the chairman.

The following officers were elected: chairman, Dr. Rudolph W. Holmes, Chicago; vice chairman, Dr. Harold C. Bailey, New York; Secretary, Dr. Carl Henry Davis, Milwaukee; delegate, Dr. George Gray Ward, New York; alternate, Dr. Arthur H. Curtis, Chicago.

Dr. John B. Swift, Boston, read a paper entitled, "When is Sterilization Indicated Following Cesarean Section?" Discussed by Drs. Rudolph W. Holmes, Chicago, and John B. Swift, Boston.

Dr. F. L. Good, Boston, read a paper on "Pregnancy and Labor Complicated by Tumors and Injuries to the Spinal Cord." Discussed by Dr. Dean Lewis, Chicago.

Dr. H. T. Cooke, Los Angeles, read a paper on "Regional Nerve-Blocking in Labor."

Dr. John S. Lundy, Rochester, Minn., read a paper on "A Comparative Study of Ethylene Anesthesia."

These two papers were discussed by Drs. Isabella C. Herb, Chicago; N. Sproat Heaney, Chicago; C. H. Davis, Milwaukee; F. W. Lynch, San Francisco; Arno B. Luckhardt, Chicago; W. F. Hewitt, Chicago; W. George Lee, Chicago; H. T. Cooke, Los Angeles, and John S. Lundy, Rochester, Minn.

Dr. John J. Gilbride, Philadelphia, read a paper on "Operations on Twelve Patients with Tumors of the Pancreas."

Drs. A. T. Mann and H. S. Willson, Minneapolis, presented a paper on "Chronic Gallbladder Disease in the Young Adult."

Dr. Arthur S. Risser, Blackwell, Okla., read a paper on "Pancreatitis: Cases and Comments."

These three papers were discussed by Dr. G. E. Holtzapple, York, Pa.

SECTION ON OPHTHALMOLOGY

WEDNESDAY, JUNE 11—MORNING

The meeting was called to order at 9:15 by the chairman, Dr. George S. Derby, Boston.

Dr. George S. Derby, Boston, read the chairman's address.

It was moved by Dr. George F. Keiper, Lafayette, Ind., that a committee of five be appointed by the chairman to consider the point in the chairman's address in reference to the dispensing of glasses by oculists, their report to be handed to the delegate from this section, Dr. Cassius D. Wescott. Seconded and carried.

Dr. Cassius D. Wescott, Chicago, offered the resolution on trachoma work among the Indians, as it appears in the minutes of the House of Delegates.

It was moved by Dr. Edward Jackson, Denver, that this resolution be adopted. Motion seconded.

Dr. J. W. Jervey, Greenville, S. C., moved as a substitute that the chairman appoint a committee of three to consider this resolution and report back to this section Thursday morning. Dr. Wescott's motion was then withdrawn and Dr. Jervey's motion carried.

Dr. John O. McReynolds, Dallas, Texas, read a paper on "Further Observation on the Management of Pterygium." Discussed by Drs. Walter R. Parker, Detroit; G. C. Savage, Nashville, Tenn.; W. S. Franklin, San Francisco; C. Norman Howard, Warsaw, Ind.; Clark W. Hawley, Chicago; R. H. T. Mann, Texarkana, Ark.; S. Lewis Ziegler, Philadelphia; W. E. Gamble, Chicago; Edward B. Heckel, Pittsburgh; Charles E. Walker, Denver, and John O. McReynolds, Dallas, Texas.

Dr. Max W. Jacobs, St. Louis, read a paper on "Retinal Hemorrhages in the New-Born." Discussed by Drs. F. Phinizy Calhoun, Atlanta, Ga.; Arthur J. Bedell, Albany, N. Y., and Max W. Jacobs, St. Louis.

The President, Dr. William Allen Pusey, the retiring President, Dr. Ray Lyman Wilbur, and the Speaker of the House of Delegates, Dr. F. C. Warnshuis, addressed the section.

Dr. H. H. Stark, El Paso, Texas, read a paper on "Conjunctivitis Infectiosa Necroticans (Pascheff)." Discussed by Drs. Derrick T. Vail, Cincinnati; George F. Keiper, Lafayette, Ind.; Charles A. Bahn, New Orleans; James M. Patton, Omaha; Clark W. Hawley, Chicago, and H. H. Stark, El Paso, Texas.

Drs. Lawrence K. Lunt and Austin Fox Riggs, Stockbridge, Mass., presented a paper on "The Ophthalmologist and the Psychoneuroses." Discussed by Drs. William T. Davis, Washington, D. C.; G. C. Savage, Nashville, Tenn.; George F. Keiper, Lafayette, Ind.; Emory Hill, Richmond, Va.; George S. Derby, Boston, and Lawrence K. Lunt, Stockbridge, Mass.

Dr. Robert Cartwright Cheney, Boston, read a paper on "Toxemias of Pregnancy from an Ophthalmologic Standpoint." Discussed by Dr. Allen Greenwood, Boston; William C. Posey, Philadelphia; Edward Jackson, Denver; Arnold Knapp, New York, and Robert Cartwright Cheney, Boston.

The Chairman appointed the following committees: Committee on Trachoma: Drs. Walter R. Parker, F. Phinizy Calhoun and E. V. L. Brown. Committee on Recommendation of President's Address: Drs. William Zentmayer, Melville Black, W. S. Franklin, Allen Greenwood and J. W. Jervey.

Dr. John A. Donovan, Butte, Mont., read a paper on "Foreign Bodies in the Lens: A New Method of Removal." Discussed by Dr. Arnold Knapp, New York, and John A. Donovan, Butte, Mont.

THURSDAY, JUNE 12—MORNING

The meeting was called to order at 9:15 by the chairman.

Dr. Edward Jackson, Denver, presented scissors for use in magnet-scissors extraction of foreign body from the eye. These scissors cut a channel from the opening in the sclera to the foreign body by cutting against the tissue, which is drawn by the magnetic attraction. The tissue is forced between the blades of the scissors, an extremely important point that has not heretofore been sufficiently emphasized.

Dr. Jackson also presented a diaphragm for the Shahan lamp for use in skiascopy; also for central ophthalmoscopy with the Gullstrand lamp. This diaphragm shuts off unnecessary light, and gives a point of light with a sharp edge.

Dr. G. C. Savage, Nashville, Tenn., presented an apparatus for the extraction of cataract in the capsule after the method of Hulen.

Dr. M. Gertrude Slaughter, Chicago, presented a simple illuminated chart holder, which may be used for the determination of visual acuity in rural districts or other places where electric current is not available. This chart holder folds into a small space and is to be connected with the physician's car. If static electricity is used, a transformer is necessary.

Dr. Lucien Howe, Buffalo, presented two cats demonstrating the unusual action of epinephrin in the eye. When epinephrin is applied to the conjunctiva of a cat, it produces little or no dilatation of the pupil; the superior ganglion is first taken out, which reduces the contraction; then epinephrin is applied, which causes the pupil to dilate.

The Committee on Trachoma presented its report.

The report of the Committee on Optical Questions was presented.

Drs. Walter Scott Franklin and Frederick C. Cordes, San Francisco, presented a paper on "Lymphangioma of the Orbit." Discussed by Drs. Marcus Feingold, New Orleans; R. H. T. Mann, Texarkana, Ark.; W. R. Parker, Detroit; Michael Goldenburg, Chicago, and Walter Scott Franklin, San Francisco.

Dr. Mary S. Knight, Rochester, Minn., read a paper on "Melanotic Neoplasms of the Eye." Discussed by Drs. E. V. L. Brown Chicago; George F. Keiper, Lafayette, Ind.; Marcus Feingold, New Orleans, and Mary S. Knight, Rochester, Minn.

Dr. Melville Black, Denver, read a paper on "Intravenous Use of Sodium Salicylate in Ocular Inflammations." Discussed by Drs. John Green, Jr., St. Louis; Albert E. Bulson, Jr., Fort Wayne, Ind.; James M. Patton, Omaha; W. H. Roberts, Pasadena, Calif., and Melville Black, Denver.

Dr. Sylvester Judd Beach, Portland, Maine, read a paper on "Edema of the Eyelids." No discussion.

Drs. Harry S. Gradle and Jules C. Stein, Chicago, presented a paper on "Telescopic Spectacles and Magnifiers as Aids to Poor Vision." Discussed by Drs. Walter B. Lancaster, Boston; Miss Cabell, Secretary, Illinois Society for Prevention of Blindness; Louis D. Green, San Francisco; William H. Crisp, Denver; Melville Black, Denver; Nelson M. Black, Milwaukee, and Jules C. Stein, Chicago.

Dr. G. E. Pfahler, Philadelphia, read a paper on "Retrobulbar Sarcoma Treated by Roentgen Rays." Discussed by Drs. S. Lewis Ziegler, Philadelphia; William Zentmayer, Philadelphia; H. Maxwell Langdon, Philadelphia; W. H. Roberts, Pasadena, Calif., and G. E. Pfahler, Philadelphia.

Dr. Laura A. Lane, Minneapolis, read a paper on "Radium in Ophthalmology, with Especial Reference to Its Use in Benign Affections." Discussed by Drs. Edward Jackson, Denver; S. Lewis Ziegler, Philadelphia; Sanford Withers, Denver; George S. Derby, Boston; Arthur J. Bedell, Albany, N. Y.; Melville Black, Denver; Malcolm P. Andrews, Manitowoc, Wis.; W. H. Wilder, Chicago; John Green, Jr., St. Louis; Harvey J. Howard, Peking, China, and Laura A. Lane, Minneapolis.

FRIDAY, JUNE 13—MORNING

The report of the Committee on Hereditary Blindness was presented. Moved by Dr. Lucien Howe, Buffalo, that the report as published in the presession volume be adopted and the committee continued. Motion seconded and carried.

The report of the Committee on Investigation of Ocular Muscles was presented. Dr. Lucien Howe, chairman of this committee, reported progress. On motion, the report was accepted and the committee continued.

The report of the Committee on Local Anesthesia in Ophthalmic Work was presented. Moved by Dr. John Green, Jr., St. Louis, that the report as published in the presession volume be accepted and the committee continued. Motion seconded and carried.

The report of the Committee on the Knapp Testimonial Fund was presented. Moved by Dr. J. W. Kimberlin, Kansas City, Mo., that the report as published in the presession volume be accepted. Motion seconded and carried.

The report of the Committee on Compensation Tables was presented. Dr. Harry Gradle, chairman of this committee, reported progress. Moved by Dr. William F. Hardy, St. Louis, that this report be accepted and the committee continued. Motion seconded and carried.

Dr. Edward Jackson, Denver, presented the report of the Committee on Award of the Knapp Medal. Moved by Dr. E. L. Goar, Houston, Texas, that this report be accepted. Motion seconded and carried.

Dr. Walter B. Lancaster, Boston, reported for the American Board for Ophthalmic Examinations. Moved by Dr. A. E. Bulson, Jr., Fort Wayne, Ind., that this report be accepted. Motion seconded and carried.

The report of the Committee on Physical Standards for Drivers of Motor Vehicles was presented.

Dr. John A. McReynolds, Chairman of the Executive Committee, read a letter from Dr. Lucien Howe, Buffalo, putting at the disposal of the section the annual income from $1,500 for the purchase of medals to be awarded for research work, this to be known as the Prize Fund of the Section on Ophthalmology. Moved by Dr. Walter B. Lancaster, Boston, that this gift be accepted. Motion seconded and carried by rising vote.

The following officers were elected: chairman, Dr. Marcus Feingold, New Orleans; vice chairman, Dr. J. M. Patton, Omaha; secretary, Dr. William C. Finnoff, Denver; member of American Board for Ophthalmic Examinations, Dr. Walter B. Lancaster, Boston.

Drs. Arnold Knapp, New York; William Zentmayer, Philadelphia, and Walter B. Lancaster, Boston, were elected to serve on the Committee on Award of the Knapp Medal. It was moved by Dr. E. C. Ellett, Memphis, Tenn., that it is the desire of this section that a list of the men to whom the Knapp Medal has been awarded, together with the titles of their papers, be published each year in the report of that committee. Motion seconded and carried.

Dr. William E. Shahan, St. Louis, read a paper on "Normal Stereoperimetry." Discussed by Drs. E. L. Goar, Houston, Texas; H. Maxwell Langdon, Philadelphia, and William E. Shahan, St. Louis.

Dr. Harvey J. Howard, Peking, China, read a paper on "Conclusions Concerning a Scleroconjunctival Suture in Cataract Extractions." Discussed by Drs. E. C. Ellett, Memphis, Tenn.; Louis D. Green, San Francisco; L. F. Fisher, Chicago; S. Lewis Ziegler, Philadelphia; Oscar Wilkinson, Washington, D. C.; John O. McReynolds, Dallas, Texas; Marcus Feingold, New Orleans; Harold Gifford, Omaha; George S. Derby, Boston, and Harvey J. Howard, Peking, China.

Dr. Harold Gifford, Omaha, read a paper on "Miscellaneous Notes on Glaucoma." Discussed by Drs. William Zentmayer, Philadelphia; Edwin N. Robertson, Concordia, Kan.; Michael Goldenburg, Chicago; Arnold Knapp, New York; Walter R. Parker, Detroit, and Harold Gifford, Omaha.

The Committee on Physical Standards for Drivers of Motor Vehicles made a further report, asking that a paragraph be inserted in the original report which provides for the existence of an appeal board to examine carefully such cases as

may fall below the standards specified in that report. Moved by Dr. Arthur J. Bedell that the committee be continued and requested to report next year. Motion seconded and carried.

Dr. J. E. Jennings, St. Louis, read a paper on "A Simple Operation for the Relief of Mild Types of Entropion and Ectropion of the Lower Lid." Discussed by Drs. W. H. Wilder, Chicago; S. Lewis Ziegler, Philadelphia; John Green, Jr., St. Louis, and G. C. Savage, Nashville, Tenn.

Drs. Helen Baldwin and Else A. S. Barthel, New York, presented a paper on the "Relation of Hyperglycemia to Cataract." Discussed by Dr. H. Maxwell Langdon, Philadelphia.

The chairman expressed his appreciation of the interest and attendance of the members of the section, and the support given him during the year; also the appreciation of the section of the courtesies and kindnesses extended by the Chicago members of the section.

Moved by Dr. Allen Greenwood that the thanks of the section be extended to Dr. Derby for the manner in which he conducted the affairs of the section. Motion seconded and carried by rising vote.

SECTION ON LARYNGOLOGY, OTOLOGY AND RHINOLOGY

WEDNESDAY, JUNE 11—AFTERNOON

The meeting was called to order at 2:15 by the chairman, Dr. Wendell C. Phillips, New York.

The chairman announced that the gavel of this section, which has been in use twenty-five years, has had the final name plate affixed to it and will be turned over to the headquarters of the American Medical Association, where a cabinet will be arranged to take care of such relics. This gavel was presented to the section twenty-five years ago by Dr. Emil Mayer of New York. Dr. Wendell C. Phillips presented the section with a new gavel.

Dr. Emil Mayer then made an informal report for the Necrology Committee. This report was accepted and the section stood with bowed heads for one minute in memory of departed members.

Dr. Wendell C. Phillips, New York, read the chairman's address.

The secretary, Dr. Samuel Iglauer, Cincinnati, read a letter from Dr. John Sendziak, Warsaw, Poland, regretting his inability to be present, on account of illness.

Dr. Arthur B. Duel, New York, read a paper on "Toxic Infection of the Auditory Nerve." Discussed by Drs. J. W. Jervey, Greenville, S. C.; Norval H. Pierce, Chicago; Clark W. Hawley, Chicago, and Cullen F. Welty, San Francisco.

The President, Dr. William Allen Pusey, and the retiring President, Dr. Ray Lyman Wilbur, addressed the section.

Dr. Andrew A. Eggston, New York, read a paper on "Allergic Reactions of the Upper Respiratory Tract." Discussed by Drs. Karl K. Koessler, Chicago; George Piness, Los Angeles, and Andrew A. Eggston, New York.

Dr. Greenfield Sluder, St. Louis, read a paper on "Some Rhinologic Observations, with Speculation Concerning the Involuntary Nervous System." Discussed by Prof. A. J. Carlson, Chicago, and Drs. H. M. Goodyear, Cincinnati, and Greenfield Sluder, St. Louis. In closing, Dr. Sluder moved a vote of thanks to Prof. A. J. Carlson for his discussion of this paper. Motion seconded and carried.

Dr. Charles H. Frazier, Philadelphia, read a paper on "The Anastomosis of the Recurrent Laryngeal Nerve with the Descendens Noni in Cases of Recurrent Laryngeal Paralysis." Discussed by Drs. Joseph C. Beck, Chicago, and Charles H. Frazier, Philadelphia.

Dr. Emil Mayer, New York, moved a vote of thanks to Dr. Wendell C. Phillips for the gavel presented to the section. Motion seconded and carried.

THURSDAY, JUNE 12—AFTERNOON

The meeting was called to order at 2:15 by Dr. T. E. Carmody, Denver.

Dr. G. Allen Robinson, New York, read a paper on "Radium Treatment of Neoplasms of the Upper Air Passages." Discussed by Drs. Homer Dupuy, New Orleans; Joseph C. Beck, Chicago, and G. Allen Robinson, New York.

Dr. Samuel J. Kopetzky, New York, read a paper on "Systemic Infections Complicating Purulent Middle Ear Disease." Discussed by Drs. John F. Barnhill, Indianapolis; Cullen F. Welty, San Francisco; Frank R. Spencer, Boulder, Colo.; Harry Boyd-Snee, South Bend, Ind.; Emanuel Libman, New York, and Samuel J. Kopetzky, New York.

Dr. Charles A. Elsberg, New York, read a paper on "Technic of the Surgery of Brain Abscess."

Dr. Joseph E. J. King, New York, read a paper on "The Treatment of Brain Abscess: A Surgical Technic in which the Usual Drainage Methods Are Avoided; Report of Cases."

These two papers were discussed by Drs. J. F. Barnhill, Indianapolis, and Charles A. Elsberg.

Dr. Wells P. Eagleton, Newark, N. J., read a paper on "Surgical Treatment of Meningitis: Third Contribution." Discussed by Drs. George E. Shambaugh, Chicago; Joseph C. Beck, Chicago, and Wells P. Eagleton, Newark, N. J.

Dr. E. I. McKesson, Toledo, Ohio, read a paper on "Pure Gas-Oxygen Anesthesia for Ear, Nose and Throat Surgery." Discussed by Drs. John Evans, Buffalo; T. E. Carmody, Denver; Oscar Wilkinson, Washington, D. C., and E. I. McKesson, Toledo, Ohio.

FRIDAY, JUNE 13—AFTERNOON

The meeting was called to order at 2:30 by the chairman, Dr. Wendell C. Phillips, New York.

The following officers were elected: chairman, Dr. Charles W. Richardson, Washington, D. C.; vice chairman, Dr. Fielding O. Lewis, Philadelphia; secretary, Dr. Samuel Iglauer, Cincinnati.

Dr. Harold M. Hays, New York, presented a new form of vibrator for the ear.

Dr. Chevalier Jackson, Philadelphia, presented, in the name of his associate, Dr. Louis Clerf, a stereoscopic photograph of the larynx.

Dr. Maury M. Stapler, Macon, Ga., presented a massage instrument which breaks up adhesions on the larynx.

Dr. William D. Black, St. Louis, presented for Dr. Greenfield Sluder a self-retaining nasal speculum for intranasal surgery.

Dr. W. Moore Thompson, Chicago, presented a new instrument to cure the thumb-sucking habit in a child.

Dr. Jacques Maliniak, Cincinnati, presented a radium carrier to be attached to the Hasslinger instrument.

Dr. M. C. Myerson, Brooklyn, presented an instrument for the improved irrigation of lung abscesses, with especial reference to upper lobe abscesses; also an improved elevator for submucous resection of the septum.

The report of the Committee on Lye Legislation was presented. Moved by Dr. W. B. Chamberlin, Cleveland, that this report be received and placed on file, and that the recommendations made in the report be the voice of this section. Motion seconded and carried.

The report of the Committee on Examining Board for Otolaryngology was presented. Moved by Dr. A. A. Hayden, Chicago, that the section concur in the recommendations of this committee. Motion seconded and carried.

The chairman appointed on the joint committee mentioned in the report, which is to constitute the American Board of Otolaryngology, Dr. Joseph C. Beck, Chicago, and Dr. Robert C. Lynch, New Orleans.

The report of the Committee on the Problems of the Hard of Hearing was presented. In addition to the report, the chairman of the committee, Dr. Harold M. Hays, New York, made the following recommendations:

That the manufacturers of hearing devices who have been endorsed by the American Federation of Organizations for the Hard of Hearing be endorsed by this section, and that a list of such firms be sent to each member of this section.

That a request be made to the American Federation of Organizations for the Hard of Hearing to prepare a list of lip-reading teachers throughout the country, and that a copy of such list be sent to each member of this section.

Moved by Dr. Charles W. Richardson, Washington, D. C., that the report be received and the recommendations adopted. Motion seconded and carried.

The report of the Committee on Otolaryngic Hygiene of Swimming was presented. Moved by Dr. T. E. Carmody, Denver, that the report be received and the committee continued; Dr. Carmody also suggested that the name of the

committee be changed to "Committee on Otorhinologic Hygiene of Swimming." Motion seconded and carried.

The report of the Committee on Education of the Deaf Child was presented.

Moved by Dr. W. B. Chamberlin that the report be accepted and placed on file and the committee continued. Motion seconded and carried.

In the absence of Dr. John Edmund MacKenty, New York, it was moved by Dr. Joseph C. Beck that his paper be read by title and that Dr. Goodyear be allowed to present Dr. MacKenty's slides. Motion seconded and carried. The paper was discussed by Drs. Chevalier Jackson, Philadelphia; Fielding O. Lewis, Philadelphia; Wendell C. Phillips, New York, and Joseph C. Beck, Chicago.

Dr. J. A. Pratt, Minneapolis, read a paper on the "Present Status of the Intranasal Ethmoid Operation." Discussed by Drs. Ross H. Skillem, Philadelphia; Charles W. Richardson, Washington, D. C.; Cullen F. Welty, San Francisco; Edwin McGinnis, Chicago, and J. A. Pratt, Minneapolis.

Drs. Chevalier Jackson, Louis H. Clerf, Gabriel Tucker, Robert Lukens and William F. Moore, Philadelphia, presented a paper on "Abscess of the Lung: Its Treatment by Aspiration and Medication Through the Mouth." Discussed by Drs. Thomas McCrae, W. F. Manges and Thomas A. Shallow, Philadelphia.

Moved by Dr. A. A. Hayden, Chicago, that the thanks of this section be extended Drs. McCrae, Manges and Shallow for their kindness in coming to discuss this paper. Motion seconded and carried.

The newly elected chairman, Dr. Charles W. Richardson, Washington, D. C., was introduced and presided for the remainder of the session.

Dr. Carl A. Hedblom, Rochester, Minn., read a paper on "Surgical Treatment of Pulmonary Abscess, with Especial Reference to the Post-Tonsillectomy Type." Discussed by Drs. M. C. Myerson, Brooklyn, and Carl W. Hedblom, Rochester, Minn.

Dr. Elbyrne G. Gill, Roanoke, Va., read a paper on "Foreign Bodies in the Lung of Dental Origin, with Analysis of One Hundred and Seventeen Cases." Discussed by Drs. W. B. Chamberlin, Cleveland; T. E. Carmody, Denver, and Chevalier Jackson, Philadelphia.

SECTION ON DISEASES OF CHILDREN

WEDNESDAY, JUNE 11—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. Henry F. Helmholz, Rochester, Minn.

Dr. Henry F. Helmholz, Rochester, Minn., read the chairman's address.

The chairman appointed Dr. Edgar P. Copeland, Washington, D. C., to serve on the Executive Committee, Dr. E. C. Fleischner, San Francisco, being absent.

Notice was given of a dinner at the Congress Hotel, with a reception to the foreign guests, Dr. Heinrich Finkelstein, Berlin, Germany, and Dr. Leonard Findlay, Glasgow, Scotland.

The President, Dr. William Allen Pusey, and the retiring President, Dr. Ray Lyman Wilbur, addressed the section.

An announcement was made of the new organization, the American Heart Association, to hold a meeting, Thursday, at 5 p. m., to which members of the section were invited.

Attention was called to a reprint of the report of the Committee on Examination of Accidents from the Use of Stearate of Zinc Dusting Powders, such reprints being for distribution.

Dr. Albert D. Kaiser, Rochester, N. Y., read a paper on "Effect of Tonsillectomy on General Health of Twelve Hundred Children, as Compared to an Equal Number Not Operated On." Discussed by Drs. E. S. Ingersoll, Rochester, N. Y.; W. A. Mulherin, Augusta, Ga.; William D. Black, St. Louis, and A. D. Kaiser, Rochester, N. Y.

Drs. William H. Park and Abraham Zingher, New York, presented a paper on "Immunity Results Obtained with Diphtheria Toxoid (Modified Toxin) and One-Tenth L+ Mixtures of Toxin-Antitoxin in the Public Schools of New York (Manhattan and the Bronx)." Discussed by Drs. F. C. Neff, Kansas City, Mo.; C. A. Earle, Des Plaines, Ill., and Abraham Zingher, New York.

Dr. William F. Reasner, Minneapolis, read a paper on "Spread of Scarlet Fever in Private Homes and in Public Schools." Discussed by Drs. Abraham Zingher, New York; George W. Goler, Rochester, N. Y., and William F. Reasner, Minneapolis.

Dr. Max Seham, Minneapolis, read a paper on "Fatigue in School Children, with Special Reference to Classification and Management." Discussed by Drs. L. W. Sauer, Evanston, Ill.; May G. Wilson, New York, and Max Seham, Minneapolis.

Dr. Borden S. Veeder, St. Louis, read a paper on "The Overweight Child." Discussed by Dr. I. A. Abt, Chicago; F. P. Gengenbach, Denver; Lulu Hunt Peters, New York, and Borden S. Veeder, St. Louis.

Dr. W. A. Mulherin, Augusta, Ga., read a paper on "Sickle Cell Anemia, from a Pediatric Point of View." Discussed by Drs. J. E. Cook, St. Louis; Dr. V. P. Sydenstricker, Augusta, Ga., and W. A. Mulherin, Augusta, Ga.

THURSDAY, JUNE 12—MORNING

The following papers were read as a symposium on "Appendicitis":

Dr. R. W. Bolling, New York: "Acute Appendicitis in Children."

Dr. Charles G. Mixter, Boston: "Chronic Appendicitis in Children."

Dr. John Howland, Baltimore: "Acute Appendicitis in Children from the Medical Point of View."

These three papers were discussed by Drs. Borden S. Veeder, St. Louis; I. A. Abt, Chicago; Robert T. Morris, New York; E. C. Junger, Soldier, Iowa, and Charles G. Mixter, Boston.

Dr. Heinrich Finkelstein, Berlin, Germany, read a paper on "Habitual Hyperthermia During Recovery from Scarlet Fever." No discussion.

Dr. Samuel Amberg, Rochester, Minn., read a paper on "Some Aspects of Enuresis." Discussed by Drs. E. J. Huenekens, Minneapolis; John A. Foote, Washington, D. C.; T. L. Bernberg, St. Paul, and Samuel Amberg, Rochester, Minn.

Dr. Floyd S. Clarke, Omaha, read a paper on "Rosenow's Serum in the Prevention of Paralysis in Anterior Poliomyelitis." Discussed by Drs. E. C. Rosenow, Rochester, Minn., and Floyd S. Clarke, Omaha.

FRIDAY, JUNE 13—MORNING

The following officers were elected: chairman, Dr. Edgar J. Huenekens, Minneapolis; vice chairman, Dr. Philip F. Barbour, Louisville, Ky.; secretary, Dr. Hugh McCulloch, St. Louis; delegate, Dr. I. A. Abt, Chicago; member of Jacoby Fund, Dr. W. A. Mulherin, Augusta, Ga.; representative to the Children's Bureau, Dr. Julius H. Hess, Chicago.

It was moved that the chairman appoint a committee of three to investigate the general question of advertising of proprietary foods in medical journals and to the laity, and report to the section at the next meeting.

Seconded and carried.

The Executive Committee reported that it had audited the funds of the Jacoby Fund and found them to be correct.

Drs. Charles C. Dennie, Kansas City, Mo., and Hugh L. Dwyer, Kansas City, Kan., presented a paper on "Results of Treatment in Four Hundred Cases of Congenital Syphilis." Discussed by Drs. Borden S. Veeder, St. Louis; Leonard Findlay, Glasgow, Scotland, and Hugh L. Dwyer, Kansas City, Kan.

Drs. Henry J. Gerstenberg and S. A. Wahl, Cleveland, presented a paper on "Ultraviolet Ray Therapy in Peritoneal and Glandular Tuberculosis of Children." Discussed by Drs. Lloyd M. Otis, Celina, Ohio, and Henry J. Gerstenberger, Cleveland.

The following papers were read as a symposium on "Rickets":

Dr. Leonard Findlay, Glasgow, Scotland: "Rickets."

Dr. C. U. Moore, Portland, Ore.: "Newer Clinical Signs of Early Rickets."

Dr. Edwin T. Wyman, Boston: "The Organization of a Special Clinic for the Treatment of Rickets with Alpine Lamp in an Outpatient Department."

Dr. Alfred F. Hess, New York: "The Influence of the Diet of the Mother During Pregnancy and Lactation on the Subsequent Development of Rickets in the Young."

Drs. L. R. DeBuys and Ludo von Mysenbug, New Orleans: "The Correlation Between the Clinical, Serologic and Radiologic Evidences of Rickets in the Breast Fed."

These five papers were discussed by: Drs. John Howland, Baltimore; H. J. Gerstenberger, Cleveland; Leonard Findlay, Glasgow, Scotland; C. U. Moore, Portland, Ore.; A. F. Hess, New York, and L. R. DeBuys, New Orleans.

Dr. Frank C. Neff, Kansas City, Mo., read a report on the Abraham Jacoby Fund for Pediatric Research; the committee on this fund consists of Drs. L. R. DeBuys, New Orleans; F. B. Talbot, Boston; C. G. Grulee, Chicago; Harold K. Faber, San Francisco, and F. C. Neff, Kansas City, Mo.

Dr. W. McKim Marriott, St. Louis, read a paper on "The Food Requirements of Malnourished Infants." Discussed by Drs. Julius H. Hess, Chicago, and W. McKim Marriott, St. Louis.

SECTION ON PHARMACOLOGY AND THERAPEUTICS

WEDNESDAY, JUNE 11—MORNING

A joint meeting was held with the Section on Preventive and Industrial Medicine and Public Health. For a report of the proceedings, see the minutes of that section.

THURSDAY, JUNE 12—MORNING

The meeting was called to order by the chairman, Dr. Paul J. Hanzlik, San Francisco.

The chairman presented the names of Isidore Greenwold, Ph.D., New York, Frances Krasnow, Ph.D., New York, and Dr. Ambrose Hunsberger, Philadelphia, to be proposed by the section for Associate Membership in the Association. It was moved and seconded and the motion carried that these names be endorsed by this section.

Dr. Hanzlik appointed Dr. William Salant, Augusta, Ga., to serve on the Executive Committee, Dr. Carl Voegtlin, Washington, D. C., being absent.

Dr. Paul J. Hanzlik, San Francisco, read the chairman's address, entitled "The Basis of Allergic Phenomena."

Dr. William Salant, Augusta, Ga., read a paper on "Conditions Modifying Actions of Drugs."

These two papers were discussed by Drs. Torald Sollmann, Cleveland; Joseph L. Miller, Chicago; R. G. Hoskins, Columbus, Ohio; F. M. Pottenger, Monrovia, Calif.; V. P. Sydenstricker, Augusta, Ga.; William Salant, Augusta, Ga., and Paul J. Hanzlik, San Francisco.

Dr. Veader Leonard, Baltimore, read a paper on "Secretion of Bactericidal Urine and Disinfection of Urinary Tract Following Oral Administration of Certain Alkyl Derivatives of Resorcinol." Discussed by Drs. Torald Sollmann, Cleveland; Hugh H. Young, Baltimore; Paul J. Hanzlik, San Francisco; George G. Smith, Boston; Edwin G. Davis, Omaha; W. G. Exton, New York, and Veader Leonard, Baltimore.

Dr. J. Gardner Hopkins, New York, read a paper on "Antisyphilitic Action of Bismuth." Discussed by Drs. J. F. Schamberg, Philadelphia; Torald Sollmann, Cleveland, and J. Gardner Hopkins, New York.

Drs. Norman M. Keith and C. W. Barrier, Rochester, Minn., presented a paper on "Calcium Therapy in Nephritis with Edema." Discussed by Drs. P. D. White, Boston; L. G. Rowntree, Rochester, Minn.; C. W. Greene, Columbia, Mo., and Norman M. Keith, Rochester, Minn.

FRIDAY, JUNE 13—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. Paul J. Hanzlik, San Francisco.

The following officers were elected: chairman, Dr. Paul D. White, Boston; vice chairman, Dr. Franklin C. McLean, Chicago; secretary, Dr. Norman M. Keith, Rochester, Minn.; alternate, Dr. Paul J. Hanzlik, San Francisco.

Dr. G. W. Piness, Los Angeles, read a paper on "Comparative Methods of Protein Extraction with Chemical and Clinical Studies." Discussed by Drs. J. H. Black, Dallas, Texas, and G. W. Piness, Los Angeles.

Dr. Phil L. Marsh, Ann Arbor, Mich., read a paper on "Concealed Infections in Diabetes Mellitus." Discussed by Drs. Bernard Fantus, Chicago; W. W. Hall, Watertown, N. Y.; R. C. Logefeil, Minneapolis, and Phil. L. Marsh, Ann Arbor, Mich.

Dr. Edward W. Jackson, Rochester, N. Y., read a paper on "Diathermy in Internal Medicine." Discussed by Drs. Elnora C. Folkmar, Washington, D. C.; Alfred Friedlander, Cincinnati; A. A. Witham, Portland, Ore., and Edward W. Jackson, Rochester, N. Y.

SECTION ON PATHOLOGY AND PHYSIOLOGY

WEDNESDAY, JUNE 11—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Kenneth M. Lynch, Dallas, Texas.

Dr. Kenneth M. Lynch, Dallas, Texas, read the chairman's address, entitled "The Specialist in Pathologic Anatomy." No discussion.

Dr. Benjamin Taylor Terry, Nashville, Tenn., read a paper on "Rapid Provisional Microscopic Diagnosis of Malignancy, Without a Microtome." Discussed by Drs. Fred D. Weidman, Philadelphia; Herman Spitz, Nashville, Tenn., and Benjamin Taylor Terry, Nashville, Tenn.

Dr. Isaac Levin, New York, read a paper on "Action of Buried Glass Capillaries of Radium Emanation on Plant and Animal Tissues." Discussed by Drs. Frank E. Simpson, Chicago, and Isaac Levin, New York.

Drs. Moses Behrend and Clinton S. Herrman, Philadelphia, presented a paper on "Clinical Versus Experimental Anastomosis of the Hollow Viscera." Discussed by Drs. J. Shelton Horsley, Richmond, Va.; Alfred A. Strauss, Chicago; John G. Sheldon, Kansas City, Mo.; J. L. Ransohoff, Cincinnati, and Moses Behrend, Philadelphia.

Dr. Frank C. Mann, Rochester, Minn., read a paper on "The Gallbladder: A Physiologic Consideration." Discussed by Drs. Moses Behrend, Philadelphia; Charles W. Greene, Columbia, Mo., and Frank C. Mann, Rochester, Minn.

The President, Dr. William Allen Pusey, and the retiring President, Dr. Ray Lyman Wilbur, addressed the section.

Dr. W. H. Manwaring, Palo Alto, Calif., read a paper on "The Hepatic Internal Secretion in Anaphylaxis." Discussed by Drs. J. P. Simonds, Chicago; V. H. Moon, Indianapolis, and W. H. Manwaring, Palo Alto, Calif.

Dr. Harry J. Corper, Denver, read a paper on "Further Observations on a Chemical Factor in the Resistance to Tuberculosis." Discussed by Drs. William F. Petersen, Chicago, and Harry J. Corper, Denver.

Dr. Charles D. Aaron, Detroit, read a paper on "The Spectroscopic and Chemical Demonstration of Occult Blood in the Feces." Discussed by Drs. Henry Albert, Reno, Nev., and Charles D. Aaron, Detroit.

The chairman presented the following names to be proposed by this section for Associate Membership in the American Medical Association:

E. O. Jordan, Ph.D., professor of hygiene and bacteriology, University of Chicago, Chicago.
V. E. Emmel, Ph.D., professor of anatomy, University of Illinois, Chicago.
Fred Wilbur Tanner, Ph.D., professor of bacteriology, University of Illinois, Urbana, Ill.
Walter Richard Miles, Ph.D., professor of experimental psychology, Stanford University, Calif.
Harvey E. Jordan, Ph.D., professor of histology and embryology, University of Virginia, Charlottesville, Va.
Thomas Gordon Hull, Ph.D., chief of division of laboratories, Department of Public Health, Springfield, Ill.
Carl O. Lathrop, PhD., assistant professor of bacteriology, University of Buffalo, Buffalo.
Dr. Stuart Mudd, Rockefeller Institute, New York (if satisfactory to the New York Medical Society).

Dr. Charles W. Greene, Columbia, Mo., requested that the name of Edgar D. Allen, Ph.D., professor of anatomy, University of Missouri, Columbia, Mo., be added to the list.

It was moved and seconded and the motion carried that the foregoing names be endorsed by the section.

THURSDAY, JUNE 12—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Kenneth M. Lynch, Dallas, Texas.

The following papers were read as a symposium on "Cancer":

Dr. Francis Carter Wood, New York: "Experimental Pathology."

Dr. James T. Ewing, New York: "Pathologic Diagnosis."

Dr. Martin Engman, St. Louis: "Diagnosis of Epithelial Cancer of the Skin."

Dr. John Dudley Dunham, Columbus, Ohio: "The Point of View of the Internist."

Dr. Edward Starr Judd, Rochester, Minn.: "The Surgical Treatment of Cancer."

Dr. James T. Case, Battle Creek, Mich.: "Radiation Therapy of Malignant Disease."

These six papers were discussed by Drs. Claude Regaud, Paris, France; H. Gideon Wells, Chicago; Dean Lewis, Chicago; Frank Smithies, Chicago; W. C. MacCarty, Rochester, Minn.; Miss Maud Slye, Chicago, and Dr. Francis Carter Wood, New York.

FRIDAY, JUNE 13—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Kenneth M. Lynch, Dallas, Texas.

The following officers were elected: chairman, Dr. Charles W. Greene, Columbia, Mo.; vice chairman, Dr. Harry J. Corper, Denver; secretary, Dr. Josiah J. Moore, Chicago.

Dr. Clyde Brooks, University, Ala., read a paper on "Preparation, Pharmacology and Therapeutic Use of Shattered Homoprotein." Discussed by Prof. A. J. Carlson, Chicago, and Dr. Clyde Brooks, University, Ala.

Dr. Charles W. Greene, Columbia, Mo., read a paper on "Some Newer Points in the Physiology of the Smooth Muscle and Its Nerve Relations." Discussed by Dr. J. M. Frazier, Belton, Texas; Prof. A. J. Carlson, Chicago, and Dr. Charles W. Greene, Columbia, Mo.

Dr. Lawrence Weld Smith, Boston, read a paper on "The Rôle of Monilia Psilosis (Ashfordi) in Experimental Sprue (Including Mycologic Studies of Twenty Strains of Monilia)." Discussed by Drs. David J. Davis, Chicago, and Lawrence Weld Smith, Boston.

Dr. David J. Davis, Chicago, read a report on "The Standardization of Clinical Laboratories."

Dr. C. W. Edmunds, Ann Arbor, Mich., read a paper on "Further Experiments with the Botulinus Toxin." Discussed by Dr. J. C. Geiger, Chicago; Prof. A. J. Carlson, Chicago, and Dr. C. W. Edmunds, Ann Arbor, Mich.

Dr. H. R. Wahl, Rosedale, Kan., read a paper on "An Unusual Fungus Occurring in Three Cases of Chronic Pulmonary Infection." Discussed by Dr. David J. Davis, Chicago.

Dr. Nelson F. Fisher, Dallas, Texas, read a paper on "The Regeneration of the Pancreas." Discussed by Prof. A. J. Carlson, Chicago; Drs. H. R. Wahl, Rosedale, Kan., and Nelson F. Fisher, Dallas.

SECTION ON STOMATOLOGY

WEDNESDAY, JUNE 11—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Joseph A. Pettit, Portland, Ore.

Dr. Weston A. Price, Cleveland, Ohio, read a paper on "Some Structural and Biochemical Factors Involved in Dental Infections and Related Degenerative Diseases."

Drs. L. W. Johnson, Washington, D. C., and John William Draper, New York, presented a paper on "The Remote Pathologic Influence of Oral Infections."

Dr. George B. Eusterman, Rochester, Minn., read a paper on "Clinical and Pathologic Aspects of Focal Infection, with Especial Reference to the Oronasal and Pharyngeal Tract."

These three papers were discussed by Drs. Charles H. Mayo, Rochester, Minn.; Arthur D. Black and Frederick B. Moorehead, Chicago; Myer Solis Cohen, Philadelphia; John J. Sullivan, Boston; Weston A. Price, Cleveland, and L. W. Johnson, Washington, D. C.

Dr. S. D. Ruggles, Portsmouth, Ohio, read a paper on "Primary Hypertrophy of the Gums." Discussed by Drs. Herbert A. Potts, Chicago, and V. H. Kazanjian, Boston.

The President, Dr. William Allen Pusey, and the retiring President, Dr. Ray Lyman Wilbur, addressed the section.

THURSDAY, JUNE 12—AFTERNOON

The meeting was called to order at 2:10 by Dr. Robert H. Ivy, Philadelphia, in the absence of Dr. Pettit.

Dr. Leroy M. Ennis, Philadelphia, Pa., read a paper on "Observations on the Diagnosis of Oral Foci of Infection." Discussed by Drs. Robert T. Morris, New York; Edward H. Hatton, Chicago; M. C. Smith, Lynn, Mass., and Leroy M. Ennis, Philadelphia.

Drs. Frederick A. Figi and Gordon B. New, Rochester, Minn., presented a paper on "The Value of the Roentgenogram in the Diagnosis of Jaw Tumors." Discussed by Drs. M. C. Smith, Lynn, Mass.; G. M. Dorrance, Philadelphia; C. W. Waldron, Minneapolis; W. T. Coughlin, St. Louis; L. W. Juergens, Milwaukee; George V. I. Brown, Milwaukee; Herbert A. Potts, Chicago; Robert H. Ivy, Philadelphia, and Frederick A. Figi, Rochester, Minn.

Dr. Hugh W. MacMillan, Cincinnati, read a paper on "A Study of Relative Density of Anatomic Structures as Affecting the Teeth and Supporting Parts." Discussed by Drs. Frederick Noyes, Chicago; Edward H. Hatton, Chicago, and Hugh W. MacMillan, Cincinnati.

Dr. Harry Parker, Rochester, Minn., read a paper on "Pain in the Fifth Nerve Area: Some Unusual and Unclassified Forms."

Dr. George M. Dorrance, Philadelphia, read a paper on "The Chemical Division of the Gasserian Ganglion for Tic Douloureux."

These two papers were discussed by Drs. William T. Coughlin, St. Louis; Frederick A. Figi, Rochester, Minn.; Frank J. Tainter, St. Louis; A. P. Munsch, St. Louis; Frederick B. Moorehead, Chicago; Harry Parker, Rochester, Minn., and George M. Dorrance, Philadelphia.

FRIDAY, JUNE 13—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman, Dr. Joseph A. Pettit, Portland, Ore.

It was moved by Dr. Robert H. Ivy, Philadelphia, that the paper of Dr. Lucius W. Johnson, Washington, D. C., on "Surgery of the Supra-Orbital Region," be read by title, as Dr. Johnson was ill. Seconded by Dr. Frederick B. Moorehead, Chicago, and carried.

It was moved by Dr. Robert H. Ivy, Philadelphia, that the chairman's address, entitled "Oral Infections, with Especial Reference to Oral Tumors," be read by title. Seconded by Dr. George V. I. Brown, Milwaukee, and carried.

The following officers were elected: chairman, Dr. C. W. Waldron, Minneapolis; vice chairman, Dr. William P. Healy, New York; secretary, Dr. Herbert A. Potts, Chicago; delegate, Dr. Eugene S. Talbott, Chicago; alternate, Dr. George V. I. Brown, Milwaukee.

Dr. William Wayne Babcock, Philadelphia, read a paper on "Injuries of Cranial Nerves from Operations on the Jaws and Neck."

Dr. V. H. Kazanjian, Boston, read a paper on "Treatment of Nasal Deformities, with Especial Reference to Prosthetic Restoration of the Nose."

Dr. Robert H. Ivy, Philadelphia, read a paper on "Repair of Acquired Defects of the Face."

Dr. Vilray Papin Blair, St. Louis, read a paper on "Nasal Deformities Associated with Congenital Cleft of the Lip."

Dr. George C. Schaeffer, Columbus, Ohio, read a paper on "Some Plastic Problems and Their Solution."

These five papers were discussed by Drs. Carl Beck, Chicago; W. T. Coughlin, St. Louis; Harry P. Ritchie, St. Paul; Truman W. Brophy, Chicago; George V. I. Brown, Milwaukee, Wis.; Frederick B. Moorehead, Chicago; V. H. Kazanjian, Boston; Robert H. Ivy, Philadelphia, and George C. Schaeffer, Columbus, Ohio.

SECTION ON NERVOUS AND MENTAL DISEASES

WEDNESDAY, JUNE 11—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. Walter F. Schaller, San Francisco.

Dr. Walter F. Schaller, San Francisco, read the chairman's address, entitled "Pathologic Physiology of the Sympathetic Nervous System."

The chairman appointed Dr. William A. Jones, Minneapolis, to serve on the Executive Committee, Dr. Peter Bassoe, Chicago, being absent.

Dr. Lewis J. Pollock, Chicago, read a paper on "Some Cases Showing Increased Muscle Movements." Discussed by Drs. Walter Timme, New York; S. Philip Goodhart, New York; Josephine A. Jackson, Pasadena, Calif., and Lewis J. Pollock, Chicago.

Dr. William House, Portland, Ore., read a paper on "Non-syphilitic Psychoses in Syphilitic Persons." Discussed by Drs. Walter F. Schaller, San Francisco; Julius Grinker, Chicago; William A. Jones, Minneapolis; Lesser Kauffman, Buffalo; Karl A. Menninger, Topeka, Kan.; Richard Dewey, Los Angeles, and William House, Portland, Ore.

Dr. Cornelius C. Wholey, Pittsburgh, read a paper on "The Mental and Nervous Side of Narcotic Drug Addictions." Discussed by Drs. Meyer Solomon, Chicago; Lydia L. Poage, Cincinnati; Walter H. Conley, New York; Josephine A. Jackson, Pasadena, Calif.; S. A. Dunham, Buffalo, and Cornelius C. Wholey, Pittsburgh.

The President, Dr. William Allen Pusey, the retiring President, Dr. Ray Lyman Wilbur, and the Speaker of the House, Dr. Frederick C. Warnshuis, addressed the section.

Dr. George Martyn, Los Angeles, read a paper on "Significance of Lumbosacral Pain." Discussed by Drs. O. S. Wightman, New York, and George Martyn, Los Angeles.

Dr. Edward Livingston Hunt, New York, read a paper on "Parkinsonian Syndrome in Encephalitis."

Dr. S. Philip Goodhart, New York, read a paper on "Residua and Sequelae of Epidemic Encephalitis, with Especial Reference to Psychotic Symptoms."

These two papers were discussed by Drs. Karl Petren, Lund, Sweden; Meyer Solomon, Chicago; William Ravine, Cincinnati, and S. Philip Goodhart, New York.

THURSDAY, JUNE 12—MORNING

The meeting was called to order at 9:15 by the chairman, Dr. Walter F. Schaller, San Francisco.

Dr. Milton B. Lennon, San Francisco, read a paper on "The Traumatized Neurotic." Discussed by Drs. David S. Booth, St. Louis; P. H. Hourigan, Buffalo; William A. Jones, Minneapolis; Hugh T. Patrick, Chicago; Meyer Solomon, Chicago; John Leeming, Chicago; Lesser Kauffman, Buffalo, and Milton B. Lennon, San Francisco.

Drs. Angus W. Morrison and H. S. Diehl, Minneapolis, presented a paper on "Studies on Mental Hygiene Needs of Freshman University Students: Preliminary Report." Discussed by Drs. Walter F. Schaller, San Francisco; William A. Jones, Minneapolis; Karl A. Menninger, Topeka, Kan.; Lesser Kauffman, Buffalo; Milton B. Lennon, San Francisco; Meyer Solomon, Chicago, and Angus W. Morrison, Minneapolis.

Dr. Edmund Jacobson, Chicago, read a paper on "The Physiology of Globus Hystericus and of Related Conditions," and presented four patients, two illustrating globus hystericus and two esophageal spasm. Discussed by Drs. David S. Booth, St. Louis, Josephine A. Jackson, Pasadena, Calif., and Edmund Jacobson, Chicago.

Dr. Alfred W. Adson, Rochester, Minn., read a paper on "Glossopharyngeal Neuralgia and Its Treatment." Discussed by Drs. Howard C. Naffziger, San Francisco; Charles R. Ball, St. Paul; A. L. Skoog, Kansas City, Mo.; George A. Moleen, Denver, and Alfred W. Adson, Rochester, Minn.

Dr. H. H. Drysdale, Cleveland, read a paper on "A Neglected Factor in the Prevention of Apoplexy." Discussed by Drs. George A. Moleen, Denver, and H. H. Drysdale, Cleveland.

Dr. Karl A. Menninger, Topeka, Kan., read a paper on "Heredosyphilitic Cranial Osteoporosis." Discussed by Drs. A. L. Skoog, Kansas City, Mo., and Karl A. Menninger, Topeka, Kan.

FRIDAY, JUNE 13—MORNING

The meeting was called to order at 9:20 by the chairman.

The chairman appointed Dr. Henry G. Brainerd, Los Angeles, to serve on the Executive Committee, Dr. Walter Timme, New York, being absent.

The following officers were elected: chairman, Dr. Edwin G. Zabriskie, New York; vice chairman, Dr. James B. Ayer, Boston; secretary, Dr. Lewis J. Pollock, Chicago.

The following papers were read as a symposium on "The Treatment of Neurosyphilis":

Dr. Loyd Thompson, Hot Springs National Park, Ark.: "Neurosyphilis Six or More Years After Treatment."

Dr. Franklin G. Ebaugh, Philadelphia: "The Use of Tryparsamide in Cases of General Paralysis: Results of the First Year's Experience."

Dr. Walter I. Lillie, Rochester, Minn.: "Ophthalmologic Observations in Tryparsamide Therapy of Central Nervous System Syphilis."

Drs. Joseph Earle Moore, Harry M. Robinson and Richard S. Lyman, Baltimore: "The Results of Tryparsamide Therapy in Syphilis."

Drs. Harry C. Solomon and Henry R. Viets, Boston: "A Comparison of Tryparsamide and Other Drugs in the Treatment of Neurosyphilis."

These five papers were discussed by Drs. Walter F. Schaller, San Francisco; James B. Ayer, Boston; J. H. Stokes, Rochester, Minn.; Lee Cady, St. Louis; A. L. Skoog, Kansas City, Mo.; Charles F. Read, Chicago; Clarence A. Neymann, Chicago; Julius Grinker, Chicago; Franklin G. Ebaugh, Philadelphia; Walter I. Lillie, Rochester, Minn.; Joseph Earle Moore, Baltimore, and Harry C. Solomon, Boston.

Dr. Charles R. Ball, St. Paul, moved that this section recommend to the Rockefeller Institute that tryparsamide either be released or be not released at this time for general use. Seconded.

Dr. G. W. Hall, Chicago, moved to lay the motion on the table. Seconded and carried.

SECTION ON DERMATOLOGY AND SYPHILOLOGY

WEDNESDAY, JUNE 11—MORNING

The meeting was called to order at 9:10 by the chairman, Dr. Harold N. Cole, Cleveland.

Dr. Harold N. Cole, Cleveland, read the chairman's address, entitled "The Dermatoses Due to Cosmetics," after which he presented the resolution on cosmetics mentioned in the minutes of the House of Delegates, and moved its adoption.

This resolution was discussed by Dr. Howard Fox, New York. Dr. Cole's motion to adopt was then put to a vote and unanimously carried.

The following papers were read as a symposium on "Syphilis":

Drs. Alan M. Chesney and Jarold E. Kemp, Baltimore: "The Incidence of Spirochaeta Pallida in the Cerebrospinal Fluid During the Early Stage of Syphilis."

Dr. James R. Driver, Cleveland: "Reinfection in Syphilis."

Dr. Karl G. Zwick, Cincinnati: "Microscopic Study of Mercury Absorption from Skin."

Dr. George W. Raiziss, Philadelphia: "Chemotherapy of Sulpharsphenamin."

Drs. Udo J. Wile and Lester M. Wieder, Ann Arbor, Mich.: "Tryparsamide in the Treatment of Neurosyphilis."

Drs. John H. Stokes and Loren W. Shaffer, Rochester, Minn.: "Results Secured by Standard Methods of Treatment in Four Hundred and Five Cases of Neurosyphilis."

These six papers were discussed by Drs. Martin F. Engman, St. Louis; Walter J. Highman, New York; Henry H. Hazen, Washington, D. C.; Augustus Ravogli, Cincinnati; Joseph Grindon, St. Louis; J. E. Moore, Baltimore; Charles F. Read, Chicago; Julius Grinker, Chicago; Jeffrey C. Michael,

Houston, Texas; James R. Driver, Cleveland; Karl G. Zwick, Cincinnati; George W. Raiziss, Philadelphia; Udo J. Wile, Ann Arbor, Mich., and John H. Stokes, Rochester, Minn.

The President, Dr. William Allen Pusey, the retiring President, Dr. Ray Lyman Wilbur, and the Speaker of the House, Dr. Frederick C. Warnshuis, addressed the section.

THURSDAY, JUNE 12—MORNING

The meeting was called to order at 9:15 by the chairman, Dr. Harold N. Cole, Cleveland.

Dr. J. Frank Schamberg, Philadelphia, read a paper on "The Known and the Unknown About Psoriasis." Discussed by Drs. Augustus Ravogli, Cincinnati; Samuel Ayres, Jr., Los Angeles; F. L. Burnett, Boston; Howard Fox, New York; Everett S. Lain, Oklahoma City; H. E. Ménage, New Orleans; Karl G. Zwick, Cincinnati, and J. Frank Schamberg, Philadelphia.

Dr. Harther L. Keim, Ann Arbor, Mich., read a paper on "Universal Leukemia Cutis." Discussed by Drs. Martin F. Engman, St. Louis; Walter J. Highman, New York, and Harther L. Keim, Ann Arbor, Mich.

Drs. George Miller MacKee and George C. Andrews, New York, presented a paper on "Congenital Ectodermal Defect." Discussed by Drs. W. H. D. Goeckerman, Rochester, Minn., and George C. Andrews, New York.

Dr. Kendall P. Frost, Los Angeles, read a paper on "Multiple Cutaneous Leiomyomas." Discussed by Drs. Otto H. Foerster, Milwaukee; Fred Wise, New York, and Kendall P. Frost, Los Angeles.

Dr. John Butler, Minneapolis, read a paper on "So-Called Acrodynia in Infants and Young Children." Discussed by Drs. Edward A. Oliver, Chicago; Lyle B. Kingery, Portland, Ore.; Oliver S. Ormsby, Chicago; Harry Foerster, Milwaukee; Henry E. Michelson, Minneapolis; Clara M. Davis, Cleveland; Howard J. Parkhurst, Toledo, Ohio; Frederick D. Weidman, Philadelphia, and John Butler, Minneapolis.

Drs. Walter J. Highman and Ray H. Rulison, New York, presented a paper on "Is Dandruff Seborrheal?" No discussion.

Dr. Eugene R. Whitmore, Washington, D. C., read a paper on "Sarcoid Due to Focal Infection." Discussed by Drs. J. S. Eisenstaedt, Chicago; Earl D. Crutchfield, Galveston, Texas; Karl G. Zwick, Cincinnati; Henry H. Hazen, Washington, D. C.; Frederick D. Weidman, Philadelphia; William H. Guy, Pittsburgh, and Eugene R. Whitmore, Washington, D. C.

FRIDAY, JUNE 13—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. Harold N. Cole, Cleveland.

Dr. Howard Fox, New York, said: You are all probably familiar with the fact that our section has received one of the certificates of merit for our exhibit. This was the first time that the section has attempted to have an exhibit. There was a slight mistake in the publication of the list of certificates granted, in which it was stated that a certificate of merit was granted to the Department of Dermatology and Syphilology of the University of Pennsylvania. This was doubtless due to the beautiful display of Dr. Frederick Weidman, but the certificate was granted to the section.

The Chairman said: I wish to state that Mrs. Stelwagon was greatly interested in this project and did much to make it a success. The Chair will entertain a motion that a vote of thanks from the section be transmitted to Mrs. Stelwagon by the secretary.

Dr. Oliver S. Ormsby, Chicago, moved that a vote of thanks be extended to Mrs. Stelwagon. Seconded and unanimously carried.

The following officers were elected: chairman, Dr. John E. Lane, New Haven, Conn.; vice chairman, Dr. John Butler, Jr., Minneapolis; secretary, Dr. James Herbert Mitchell, Chicago.

Drs. Howard Morrow and Hiram E. Miller, San Francisco, presented a paper on "Tuberculosis of the Tongue."

Dr. Henry E. Michelson, Minneapolis, read a paper on "Tuberculosis Colliquativa (Scrofuloderma)."

These two papers were discussed by Drs. Oliver S. Ormsby, Chicago; Grover W. Wende, Buffalo; Erwin P. Zeisler, Chicago; Harold N. Cole, Cleveland; F. W. Cregor, Indianapolis; Frederick A. Figi, Rochester, Minn.; I. L. McGlasson, San Antonio, Texas; Howard Morrow, San Francisco, and Henry E. Michelson, Minneapolis.

Drs. William H. Guy and F. M. Jacob, Pittsburgh, presented a paper on "Sporotrichosis." Discussed by Drs. D. J. Davis, Chicago; Harry Foerster, Milwaukee; F. G. Cregor, Indianapolis; Everett S. Lain, Oklahoma City; Frederick D. Weidman, Philadelphia, and William H. Guy, Pittsburgh.

Dr. William L. McBride, Kansas City, Mo., read a paper on "Further Observations in the Treatment of Arsphenamin Dermatitis, Mercurial Poisoning and Lead Intoxication." Discussed by Drs. C. C. Dennie, Kansas City, Mo.; Oliver S. Ormsby, Chicago; Jeffrey C. Michael, Houston, Texas; Harold N. Cole, Cleveland; Henry H. Hazen, Washington, D. C.; Milton Cohen, Cleveland; James Herbert Mitchell, Chicago; William L. McBride, Kansas City, Mo., and C. C. Dennie, Kansas City, Mo.

Dr. Samuel Ayres, Jr., Los Angeles, read a paper on "Glucose Tolerance Reactions in Eczema." Discussed by Drs. I. L. McGlasson, San Antonio, Texas; Karl G. Zwick, Cincinnati; Jeffrey C. Michael, Houston, Texas; William Allen Pusey, Chicago, and Samuel Ayres, Jr., Los Angeles.

Dr. Ernest Dwight Chipman, San Francisco, read a paper on "Electricity in Dermatology." Discussed by Drs. Howard Fox, New York; I. L. McGlasson, San Antonio, Texas; Harry G. Irvine, Minneapolis; R. C. Jamieson, Detroit; William Allen Pusey, Chicago; William H. Guy, Pittsburgh; Harold N. Cole, Cleveland, and Ernest Dwight Chipman, San Francisco.

Dr. J. Harper Blaisdell, Boston, read a paper on "Management of Impetigo Contagiosa in Maternity Hospitals." Discussed by Drs. Everett S. Lain, Oklahoma City; John E. Lane, New Haven, Conn.; H. E. Ménage, New Orleans; C. C. Dennie, Kansas City, Mo., and J. Harper Blaisdell, Boston.

Dr. Oliver S. Ormsby, Chicago, moved a vote of thanks to the presiding officers for the excellent way in which the sessions had been conducted. Seconded and unanimously carried.

SECTION ON PREVENTIVE AND INDUSTRIAL MEDICINE AND PUBLIC HEALTH

WEDNESDAY, JUNE 11—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. W. S. Leathers, University, Miss.

Dr. W. S. Leathers, University, Miss., read the chairman's address, entitled "Fundamentals in the Development of a County Health Department." Discussed by Drs. Arthur T. McCormack, Louisville, Ky., and John A. Ferrell, New York.

A joint meeting was held with the Section on Pharmacology and Therapeutics.

The following papers were read as a symposium on "Resuscitation":

Dr. Wills Maclachlan, Toronto, Canada: "Resuscitation After Electrical Shock."

Dr. Cecil K. Drinker, Boston: "Artificial Respiration in Electric Shock and Gas Poisoning." On motion, this paper was read by the secretary, of the Section on Pharmacology and Therapeutics, Dr. Paul D. White, Boston, owing to the illness of the author.

Dr. Yandell Henderson, New Haven, Conn.: "Resuscitation from Carbon Monoxid Asphyxia, from Ether or Alcohol Intoxication, and from Respiratory Failure Due to Other Causes."

These three papers were discussed by Mr. Charles B. Scott, National Electric Light Association, Chicago, and Drs. Wills Maclachlan, Toronto, Canada; Yandell Henderson, New Haven, Conn.; J. Birney Guthrie, New Orleans, and J. H. Wilms, Cincinnati.

The following papers were read as a symposium on "Lead Poisoning":

Dr. Marvin D. Shie, Cleveland: "Diagnosis of Lead Poisoning."

Dr. Alice Hamilton, Boston: "Lead Poisoning in Industry."

Dr. Joseph C. Aub, Boston: "Recent Studies of the Mechanism and Treatment of Lead Poisoning."

These three papers were discussed by Drs. Paul J. Hanzlik, San Francisco; Emery R. Hayhurst, Columbus, Ohio; Torald Sollmann, Cleveland; J. Birney Guthrie, New Orleans; Marvin D. Shie, Cleveland; Alice Hamilton, Boston, and Joseph C. Aub, Boston.

The President, Dr. William Allen Pusey, the retiring President, Dr. Ray Lyman Wilbur, and the Speaker of the House of Delegates, Dr. Frederick C. Warnshuis, addressed the meeting.

THURSDAY, JUNE 12—MORNING

The meeting was called to order at 9:15 by the chairman, Dr. W. S. Leathers, University, Miss.

Dr. W. A. Evans, Chicago, presented the following resolution:

Resolved, That it is the sense of the Section on Preventive and Industrial Medicine and Public Health that the use of water by a municipality for the purpose of drinking, sanitation and the preservation of health is more important for social welfare than is any other purpose to which water can be put, and, therefore, should take precedence in law and in custom over all other demands for water; and be it

Resolved, That a high disease and death rate from typhoid fever and other diseases due to the use of polluted water by the people of any municipality through carriers and otherwise would imperil the country at large.

W. S. LEATHERS, Chairman.
W. F. DRAPER, Secretary.

This motion was seconded by Dr. Gilbert E. Seaman, Milwaukee, and discussed by Drs. Gilbert E. Seaman, Milwaukee; William L. Holt, Little Rock, Ark.; W. A. Evans, Chicago, and Eugene R. Kelley, Boston.

The motion was adopted and forwarded to the House of Delegates.

Dr. J. Howard Beard, Urbana, Ill., read a paper on "Opportunities of Preventive Medicine in Institutions of Higher Learning." Discussed by Drs. J. J. McShane, Springfield, Ill.; W. A. Evans, Chicago; A. M. Stimson, Washington, D. C.; Isaac D. Rawlings, Springfield, Ill.; H. S. Mustard, Murfreesboro, Tenn., and J. Howard Beard, Urbana, Ill.

Dr. A. M. Stimson, Washington, D. C., read a paper on "Public Health Research." Discussed by Drs. Edwin O. Jordan, Chicago; Herman N. Bundesen, Chicago; Walter H. Brown, Mansfield, Ohio, and A. M. Stimson, Washington, D. C.

Dr. W. S. Rankin, Raleigh, N. C., read a paper on "The Elimination of Personal Politics from Public Health Work." Discussed by Drs. W. C. Woodward, Chicago; V. H. Bassett, Savannah, Ga.; J. E. Monger, Columbus, Ohio; John D. McLean, Harrisburg, Pa.; Harold B. Wood, Bloomington, Ill.; S. W. Welch, Montgomery, Ala.; Matthias Nicoll, Jr., Albany, N. Y., and W. S. Rankin, Raleigh, N. C.

Dr. H. H. Hazen, Washington, D. C., read a paper on "Eczematoid Ringworm." Discussed by Drs. J. W. Kerr, Washington, D. C.; William D. Stovall, Madison, Wis.

Drs. Eugene R. Kelley and Albert Pfeiffer, Boston, presented a paper on "Some Special Features of the Massachusetts Program for Venereal Disease Control." Discussed by Drs. C. C. Pierce, Chicago; H. G. Irvine, Minneapolis, and Eugene R. Kelley, Boston.

FRIDAY, JUNE 13—MORNING

The meeting was called to order at 9:20 by the chairman, Dr. W. S. Leathers, University, Miss.

The following officers were elected: chairman, Dr. Oscar Dowling, New Orleans; vice chairman, Dr. Herman N. Bundesen, Chicago; secretary, Dr. W. F. Draper, Washington, D. C.; delegate, Dr. W. S. Leathers, University, Miss.

Dr. M. Gertrude Slaughter, Chicago, demonstrated a collapsible, portable, illuminated eye chart holder.

Dr. Leland E. Cofer, New York, read a paper on "The Aims of the Division of Industrial Hygiene of the New York State Department of Labor." Discussed by Drs. T. R. Crowder, Chicago; F. L. Rector, New York; Emery R. Hayhurst, Columbus, Ohio; Frederick L. Hoffman, Wellesley Hills, Mass.; Alice Hamilton, Boston; P. H. Hourigan, Buffalo, and Leland E. Cofer, New York.

Drs. Orianna McDaniel and E. M. Wade, St. Paul, presented a "Report of an Epidemic of Paratyphoid Fever in Patrons of a Cafeteria." Discussed by Drs. N. O. Gunderson, Rockford, Ill., and Orianna McDaniel, St. Paul.

Dr. Haven Emerson, New York, read a paper on "Deaths from Diabetes in New York City Since 1868." Discussed by Drs. Louis I. Dublin, New York; Eugene L. Fisk, New York; Isaac I. Lemann, New Orleans, and Haven Emerson, New York.

Dr. Louis I. Dublin, New York, read a paper on "Outlook for Public Health and Preventive Medicine." Discussed by Drs. W. A. Evans, Chicago; John M. Dodson, Chicago; Lulu Hunt Peters, New York, and Louis I. Dublin, New York.

Dr. F. M. Meader, Detroit, read a paper on "Observations on the Diphtheria Carrier as an Agent in the Spread of Diphtheria." Discussed by Drs. Dwight M. Lewis, New Haven, Conn.; A. J. Chesley, St. Paul; John F. Hogan, Baltimore; Otis B. Nesbit, Gary, Ind.; Millard Knowlton, Hartford, Conn., and F. M. Meader, Detroit.

Dr. Oscar Dowling, New Orleans, assumed the chair, and addressed the section.

Dr. G. W. Goler, Rochester, N. Y., read a paper on "The Control of Diphtheria." No discussion.

SECTION ON UROLOGY

WEDNESDAY, JUNE 11—AFTERNOON

The meeting was called to order at 2:10 by the chairman, Dr. Herman L. Kretschmer, Chicago.

The secretary called attention to the paper of Dr. Veader Leonard, Baltimore, on "Secretion of Bactericidal Urine and Disinfection of Urinary Tract Following Oral Administration of Certain Alkali Derivatives of Resorcinol," which was to be read before the Section on Pharmacology and Therapeutics, Thursday morning, and stated that the paper would have been presented before the Section on Urology had the title been received in time. He urged all those who were interested in this work to attend that section, Thursday morning.

Dr. Arthur H. Crosbie, Boston, read a paper on "Notes on a series of Prostatectomies."

Dr. Edwin G. Davis, Omaha, read a paper on "Perineal Prostatectomy, with Particular Reference to Hemostasis and to Sacral Anesthesia."

Dr. John R. Caulk, St. Louis, read a paper on "Punch Operation."

These three papers were discussed by Drs. Bransford Lewis, St. Louis; Louis E. Schmidt, Chicago; Parker Syms, New York; Otto J. Wilhelmi, Jr., St. Louis; Hugh H. Young, Baltimore; B. A. Thomas, Philadelphia; H. J. Scherck, St. Louis; Leon Herman, Philadelphia; Herman L. Kretschmer, Chicago; Edwin G. Davis, Omaha, and John R. Caulk, St. Louis.

The President, Dr. William Allen Pusey, and the retiring President, Dr. Ray Lyman Wilbur, addressed the section.

Drs. Henry G. Bugbee and Martha Wollstein, New York, presented a paper on "Surgical Pathology of the Urinary Tract in Infants, Based on a Review of Four Thousand Nine Hundred Necropsies." Discussed by Drs. Daniel N. Eisendrath, Chicago; Irvin S. Koll, Chicago; William F. Braasch, Rochester, Minn., Bransford Lewis, St. Louis; William E. Stevens, San Francisco; John R. Caulk, St. Louis; Clinton K. Smith, Kansas City, Mo.; Herman L. Kretschmer, Chicago, and Henry G. Bugbee, New York.

Dr. Verne C. Hunt, Rochester, Minn., read a paper on "Perinephritic Abscess."

Dr. Nelse F. Ockerblad, Kansas City, Mo., read a paper on "Perinephritic Abscess as a Urologic Problem."

These two papers were discussed by Drs. William F. Braasch, Rochester, Minn.; Fred C. Herrick, Cleveland; Arthur L. Chute, Boston; Irvin S. Koll, Chicago; James A. Gardner, Buffalo; Bransford Lewis, St. Louis; Leon Herman, Philadelphia; Herman L. Kretschmer, Chicago; Verne C. Hunt, Rochester, Minn., and Nelse F. Ockerblad, Kansas City, Mo.

The secretary read a telegram from Dr. C. W. Collings, New York, asking that he and Dr. E. L. Keyes be granted a

few moments in which to report on the application of the radiotherm in urology, and a letter from Dr. Herluf G. Lund, St. Louis, requesting a few moments in which to present two very interesting specimens to the section.

Dr. William F. Braasch, Rochester, Minn., moved that five minutes be granted to each during the sessions. Seconded and carried.

Dr. C. W. Collings, New York, described the radiotherm.

Thursday, June 12—Afternoon

The meeting was called to order at 2:10 by the chairman, Dr. Herman L. Kretschmer, Chicago.

Dr. Herman L. Kretschmer, Chicago, read the chairman's address, entitled "Graduate Teaching in Urology."

The chairman read a telegram from Dr. W. Calhoun Stirling, Winston-Salem, N. C., expressing his regret at his inability to attend the meeting and read his paper.

The following papers were presented as a symposium on "Hematuria":

Dr. Arthur L. Chute, Boston: "Importance of Hematuria as a Symptom."

Drs. Edwin A. Locke and George R. Minot, Boston: "Hematuria as a Symptom of Systemic Disease."

Dr. Leon Herman, Philadelphia: "Renal Hematuria."

Dr. George R. Livermore, Memphis, Tenn.: "Possible Causes of Renal Bleeding Which Cannot Be Accurately Diagnosed."

Dr. B. A. Thomas, Philadelphia: "Hematuria of Bladder Origin."

Dr. Walter H. McNeill, Jr., New York: "Hematuria of Prostatic and Urethral Origin."

The chairman appointed Dr. H. C. Bumpus, Rochester, Minn., to serve on the Executive Committee, in the absence of Dr. Henry G. Bugbee, New York.

These six papers were discussed by Drs. Bransford Lewis, St. Louis; H. C. Bumpus, Rochester, Minn.; Daniel N. Eisendrath, Chicago; W. F. Stevens, San Francisco; A. W. Nelson, Cincinnati; James A. Gardner, Buffalo; E. O. Smith, Cincinnati; W. G. Schulte, Salt Lake City; P. E. McCown, Indianapolis; Terry M. Townsend, New York; W. B. Dakin, Los Angeles; Herman L. Kretschmer, Chicago; Arthur L. Chute, Boston; Leon Herman, Philadelphia; George R. Livermore, Memphis, Tenn.; B. A. Thomas, Philadelphia, and Walter H. McNeill, Jr., New York.

Dr. H. G. Lund, St. Louis, presented specimens and photographs.

Friday, June 13—Afternoon

The meeting was called to order at 2 o'clock by the chairman, Dr. Herman L. Kretschmer, Chicago.

The following officers were elected: chairman, Dr. John T. Geraghty, Baltimore; vice chairman, Dr. Robert V. Day, Los Angeles.

Dr. Albert J. Scholl, Rochester, Minn., read a paper on "Tumors Involving the Dome of the Bladder."

Dr. Hermon C. Bumpus, Rochester, Minn., read a paper on "Modern Methods and Results of Treating Malignancy of the Bladder."

Dr. H. W. E. Walther, New Orleans, read a paper on "Diathermy in Urology."

These three papers were discussed by Drs. B. C. Corbus, Chicago; Gustav Kolischer, Chicago; George Gilbert Smith, Boston; B. A. Thomas, Philadelphia; Vincent J. O'Conor, Chicago; Robert H. Herbst, Chicago; W. B. Dakin, Los Angeles; Arthur L. Chute, Boston; Daniel N. Eisendrath, Chicago; James A. Gardner, Buffalo; Herman L. Kretschmer, Chicago; Hermon C. Bumpus, Rochester, Minn., and H. W. E. Walther, New Orleans.

Drs. William E. Stevens and Elizabeth Arthurs, San Francisco, presented a paper on "The Female Bladder." Discussed by Drs. Robert H. Herbst, Chicago; Daniel N. Eisendrath, Chicago; Victor D. Lespinasse, Chicago; Bransford Lewis, St. Louis; P. E. McCown, Indianapolis; James A. Gardner, Buffalo, and William E. Stevens, San Francisco.

Drs. Robert V. Day and Harry W. Martin, Los Angeles, presented a paper on "Diverticula of the Urinary Bladder.'

Dr. Frederick T. Lau, New York, presented a paper on "Recurrence of Stone in the Urinary Tract."

These two papers were discussed by Drs. Daniel N. Eisendrath, Chicago; Robert H. Herbst, Chicago; B. A. Thomas, Philadelphia; P. E. McCown, Indianapolis; Victor D. Lespinasse, Chicago; Herman L. Kretschmer, Chicago; Robert V. Day, Los Angeles, and Frederick T. Lau, New York.

SECTION ON ORTHOPEDIC SURGERY

Wednesday, June 11—Afternoon

The meeting was called to order at 2 o'clock by the chairman, Dr. Henry B. Thomas, Chicago.

Dr. G. D. Marshall, Kokomo, Ind., read a paper on "Clawfoot: Operation for, and New Instruments to Shorten Time of, Operation." Discussed by Drs. F. J. Gaenslen, Milwaukee; C. B. Francisco, Kansas City, Mo.; G. I. Bauman, Cleveland; Edwin W. Ryerson, Chicago, and G. D. Marshall, Kokomo, Ind.

Dr. M. L. Klinefelter, St. Louis, read a paper on "Dislocations of and Fractures Involving the Knee Joint." Discussed by Drs. Kellogg Speed, Chicago; W. C. Campbell, Memphis, Tenn.; H. Winnett Orr, Lincoln, Neb., and M. L. Klinefelter, St. Louis.

Dr. Philip D. Wilson, Boston, read a paper on "Seven Cases of Displacement of the Upper Epiphysis of the Femur Treated by Open Reduction." Discussed by Drs. W. R. Cubbins, Chicago; Willis C. Campbell, Memphis, Tenn.; Frank D. Dickson, Kansas City, Mo.; Charles LeRoy Lowman, Los Angeles; Dennis W. Crile, Chicago; M. L. Klinefelter, St. Louis, and Philip D. Wilson, Boston.

Dr. Frank D. Dickson, Kansas City, Mo., read a paper on "The Treatment of Spastic Paralysis, with Special Reference to the Stoffel Operation." Discussed by Drs. A. Bruce Gill, Philadelphia; R. O. Ritter, Chicago; J. S. Speed, Memphis, Tenn.; J. F. McDonald, Omaha; G. I. Bauman, Cleveland, and Frank D. Dickson, Kansas City, Mo.

Dr. Albert E. Freiberg, Cincinnati, read a paper on "Again the Operation for Hallux Valgus." Discussed by Drs. John L. Porter, Chicago; Melvin S. Henderson, Rochester, Minn., and Albert E. Freiberg, Cincinnati.

The President, Dr. William Allen Pusey, and the retiring President, Dr. Ray Lyman Wilbur, addressed the section.

Dr. Arthur Steindler, Iowa City, read a paper on "Synovectomy and Fat Pad Removal of the Knee." Discussed by Drs. Nathaniel Allison, Boston; Frank D. Dickson, Kansas City, Mo., and Arthur Steindler, Iowa City.

Dr. Nathaniel Allison, Boston, read a paper on "Tuberculosis of the Knee: The Importance of Early Diagnosis." Discussed by Drs. E. W. Ryerson, Chicago; Melvin S. Henderson, Rochester, Minn., and Nathaniel Allison, Boston.

Dr. Richard Kovacs, New York, read a paper on "Physiotherapy in Orthopedic Surgery." Discussed by Drs. Charlton Wallace, New York; John P. Lord, Omaha, and Benjamin Koven, Brooklyn.

Thursday, June 12—Afternoon

The meeting was called to order at 2 o'clock by the chairman, Dr. Henry B. Thomas, Chicago.

Dr. J. S. Speed, Memphis, Tenn., read a paper on "Synovectomy of the Knee Joint." Discussed by Drs. George de Tarnowsky, Chicago; Albert E. Freiberg, Cincinnati, and J. S. Speed, Memphis, Tenn.

Drs. H. Winnett Orr and J. E. M. Thomson, Lincoln, Neb., presented a paper on "Maintaining Length and Position in the Treatment of Compound Fractures." Discussed by Drs. F. G. Dyas, Chicago; F. J. Gaenslen, Milwaukee; John P. Lord, Omaha; P. P. Grosso, Chicago, and J. E. M. Thomson, Lincoln, Neb.

Dr. Walter G. Stern, Cleveland, read a paper on "Conservative Treatment of Compound Fractures." Discussed by Drs. T. Turner Thomas, Philadelphia; Karl A. Meyer, Chicago; R. H. McKay, Akron, Ohio; Edward J. Lewis, Chicago; G. D. Marshall, Kokomo, Ind., and Walter G. Stern, Cleveland.

Dr. Henry Bascom Thomas, Chicago, read the chairman's address, entitled "Orthopedic Preventive Medicine." No discussion.

Dr. E. G. Brackett, Boston, read a paper on "Injuries to the Low Back in Their Relations to Industrial Accidents." Discussed by Drs. John L. Porter, Chicago; Paul B. Magnuson, Chicago; Robert Carothers, Cincinnati; G. I. Bauman, Cleveland; Charles M. Jacobs, Chicago; H. R. Allen, Indianapolis, and E. G. Brackett, Boston.

Dr. Barney Brooks, St. Louis, read a paper on "The Diagnosis and Treatment of Vascular Diseases of the Extremities." Discussed by Drs. Mont R. Reid, Cincinnati; Victor D. Lespinasse, Chicago; Leo Eloesser, San Francisco; H. R. Allen, Indianapolis, and Barney Brooks, St. Louis.

Dr. R. M. Little, Albany, N. Y., read a paper on "Industrial Rehabilitation." Discussed by Dr. Harry E. Mock, Chicago.

FRIDAY, JUNE 13—AFTERNOON

The meeting was called to order at 2:15 by the chairman, Dr. Henry B. Thomas, Chicago.

The following officers were elected: chairman, Dr. F. J. Gaenslen, Milwaukee; vice chairman, Dr. Arthur Bruce Gill, Philadelphia; secretary, Dr. James Archer O'Reilly, St. Louis; delegate, H. Winnett Orr, Lincoln, Neb.; alternate, Dr. Melvin S. Henderson, Rochester, Minn.

Dr. Walter G. Stern, Cleveland, moved that the secretary of the section be instructed to get in touch with the Secretary of the American Medical Association to see whether a list of men interested in orthopedic surgery may be put at the disposal of the men who register and are interested in this work. Seconded and carried.

Dr. Frederick C. Kidner, Detroit, read a paper on "Köhler's Disease of the Tarsal-Scaphoid." Discussed by Drs. Philip Lewin, Chicago; Charles LeRoy Lowman, Los Angeles, and Frederick C. Kidner, Detroit.

Drs. Robert B. Cofield and Karl F. Little, Cincinnati, presented a paper on "Syphilitic Spondylitis." Discussed by Drs. E. J. Berkheiser, Chicago; James Archer O'Reilly, St. Louis; Karl G. Zwick, Cincinnati; W. K. West, Oklahoma City; R. Wallace Billington, Nashville, Tenn., and Robert B. Cofield, Cincinnati.

Dr. A. Bruce Gill, Philadelphia, read a paper on "Fibrous Ankylosis of the Hand Due to Prolonged Swelling." Discussed by Drs. Barney Brooks, St. Louis; Robert T. Morris, New York; Kellogg Speed, Chicago; Walter G. Stern, Cleveland; Willis C. Campbell, Memphis, Tenn.; H. R. Allen, Indianapolis, and A. Bruce Gill, Philadelphia.

Dr. Henry W. Myerding, Rochester, Minn., read a paper on "Giant Cell Tumors of the Long Bones." Discussed by Drs. D. B. Phemister, Chicago; E. W. Beasley, Chicago, and Henry W. Myerding, Rochester, Minn.

Dr. Frank R. Ober, Boston, read a paper on "Posterior Arthrotomy of the Hip Joint." No discussion.

Dr. R. Wallace Billington, Nashville, Tenn., read a paper on "Spondylitis Following Cerebrospinal Meningitis." No discussion.

Dr. Allen D. Smith, New York, read a paper on "The Diagnosis of Early Joint Tuberculosis." Discussed by Drs. Edward J. Lewis, Chicago, and Allan D. Smith, New York.

SECTION ON GASTRO-ENTEROLOGY AND PROCTOLOGY

WEDNESDAY, JUNE 11—AFTERNOON

The meeting was called to order at 2:15 by the chairman, Dr. Franklin W. White, Boston.

Dr. Franklin W. White, Boston, read the chairman's address, entitled "The Modern Examination of a Patient with Chronic Intestinal Disease."

Dr. Anthony Bassler, New York, read a paper on "Quantitative Test of Digestive Pancreatic Activity." Discussed by Drs. Burrill B. Crohn, New York; Daniel N. Silverman, New Orleans, and Anthony Bassler, New York.

Dr. Sanford M. Rosenthal, Baltimore, read a paper on "Phenoltetrachlorphthalein Test of Liver Function: Studies with Author's Method."

Drs. George Morris Piersol and H. L. Bockus, Philadelphia, presented a paper on "Comparative Studies in Liver Function by Some of the Later Methods."

These two papers were discussed by Drs. B. W. Fontaine, Memphis, Tenn.; Frank D. Gorham, St. Louis; T. G. Schnabel, Philadelphia; A. A. Jones, Buffalo; Waltman Walters, Rochester, Minn.; Julius Friedenwald, Baltimore; Sanford M. Rosenthal, Baltimore, and H. L. Bockus, Philadelphia.

Dr. Henry Wald Bettman, Cincinnati, read a paper on "Diagnostic Errors Leading to Uncalled for Appendectomy." Discussed by Drs. David Riesman, Philadelphia; Anthony Bassler, New York, and Henry Wald Bettman, Cincinnati.

Dr. Francis Lowell Burnett, Boston, read a paper on "Faulty Food Factors and Atonic Constipation." Discussed by Dr. Leon Bloch, Chicago.

Dr. J. F. Montague, New York, read a paper on "The Unrecognized Clinical Importance of Anal Pruritus." Discussed by Drs. R. W. Jackson, Fall River, Mass.; L. J. Hirschman, Detroit, and J. F. Montague, New York.

THURSDAY, JUNE 12—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman.

Dr. W. Howard Barber, New York, read a paper on "Motility of the Stomach After Local Resection for Gastric Ulcer." Discussed by Drs. L. T. LeWald, New York, and W. Howard Barber, New York.

Dr. W. C. MacCarty, Rochester, Minn., read a paper on "Duodenal Ulcers." Discussed by Drs. George B. Eusterman, Rochester, Minn.; Sidney Strauss, Chicago; R. D. Carman, Rochester, Minn., and W. C. MacCarty, Rochester, Minn.

Dr. Horace W. Soper, St. Louis, read a paper on "A Clinical Study of the Effects of Magnesium Sulphate in Biliary Drainage." Discussed by Drs. B. B. Vincent Lyon, Philadelphia; Max Dreyfoos, Cincinnati; R. B. Oleson, Chicago; Julius Friedenwald, Baltimore; Anthony Bassler, New York, and Horace W. Soper, St. Louis.

Drs. R. D. Carman and V. S. Counseller, Rochester, Minn., presented a paper on "Roentgenologic Diagnosis of Cholecystic Disease by the Graham Method." Discussed by Drs. L. G. Cole, New York; L. T. LeWald, New York, and R. D. Carman, Rochester, Minn.

Dr. L. B. Morrison, Boston, read a paper on "Diaphragmatic Hernia, Especially Hernia of the Stomach Through the Esophageal Hiatus." Discussed by Drs. Milton M. Portis, Chicago, and Daniel N. Silvermann, New Orleans.

Dr. Julius Friedenwald, Baltimore, read a paper on "Some Observations on the Presence of Free Hydrochloric Acid in the Gastric Contents in Carcinoma of the Stomach." Discussed by Dr. Seale Harris, Birmingham, Ala.

Dr. Elmer L. Eggleston, Battle Creek, Mich., read a paper on "Gastric Secretory Disturbances." Discussed by Drs. Clement R. Jones, Pittsburgh; A. C. Ivy, Chicago; Julius Friedenwald, Baltimore; Franklin W. White, Boston, and Elmer L. Eggleston, Battle Creek, Mich.

FRIDAY, JUNE 13—AFTERNOON

The meeting was called to order at 2 o'clock by the chairman.

The following officers were elected: chairman, Dr. Ralph W. Jackson, Fall River, Mass.; vice chairman, Dr. Sidney K. Simon, New Orleans; secretary, Dr. Frank Smithies, Chicago; delegate, Dr. George B. Evans, Dayton, Ohio; alternate, Dr. Walter A. Bastedo, New York.

Dr. Jerome M. Lynch, New York, read a paper on "Ileocecal Tuberculosis from a Surgical Standpoint." Discussed by Drs. J. Rawson Pennington, Chicago; Frank Smithies, Chicago; Walter A. Bastedo, New York; Russell S. Boles, Philadelphia, and Jerome M. Lynch, New York.

Dr. Burrill B. Crohn, New York, read a paper on "The Pathology and Therapy of Chronic Ulcerative Colitis." Discussed by Drs. George C. Mizell, Atlanta, Ga.; Sidney A. Portis, Chicago; Frank Smithies, Chicago; Sidney K. Simon,

New Orleans; Jerome M. Lynch, New York; Anthony Bassler, New York; R. W. Jackson, Fall River, Mass., and Burrill B. Crohn, New York.

Dr. John Bryant, Boston, read a paper on "A Diet for Chronic Intestinal Disease." Discussed by Drs. Walter A. Bastedo, New York, and John Bryant, Boston.

Dr. George R. Cowgill, New Haven, Conn., read a paper on "Vitamin B and Gastric Motility." Discussed by Drs. A. B. Luckhardt, Chicago, and George R. Cowgill, New Haven, Conn.

Dr. Charles G. Heyd, New York, read a paper on "Changes in the Liver Associated with Infection of the Appendix." Discussed by Drs. C. A. Elliott, Chicago; John A. Lichty, Clifton Springs, N. Y., and Charles G. Heyd, New York.

Dr. Curtice Rosser, Dallas, Texas, read a paper on "Rectal Pathology in the Negro—Incidence and Peculiarities." Discussed by Drs. Rudolph Matas, New Orleans; Joseph F. Montague, New York, and E. G. Martin, Detroit.

Dr. F. Gregory Connell, Oshkosh, Wis., read a paper on "Intestinal Protozoan Parasites." Discussed by Drs. J. M. Blackford, Seattle; Frank Smithies, Chicago, and George A. Gray, San Jose, Calif.

SECTION ON MISCELLANEOUS TOPICS

MEETING ON ANESTHESIA

WEDNESDAY, JUNE 11—MORNING

The meeting was called to order at 9:30 by the chairman, Dr. James T. Gwathmey, New York.

Dr. James T. Gwathmey, New York, read the chairman's address, entitled "Painless Childbirth by Synergistic Method."

Dr. A. E. Guedel, Indianapolis, read a paper on "Metabolism and Reflex Irritability in General Anesthesia." No discussion.

Drs. Herbert Willy Meyer, New York, and Burtis F. Robbins, Salt Lake City, presented "A Report on Colonic Anesthesia." No discussion.

The following papers were read as a symposium on "Ethylene":

Dr. Arno B. Luckhardt, Chicago: "Introductory Remarks."

Dr. C. D. Leake, Madison, Wis.: "Blood Changes Under Ethylene-Oxygen Anesthesia."

Dr. Arthur Dean Bevan, Chicago: "Ethylene-Oxygen Anesthesia in General Surgery."

Dr. N. Sproat Heaney, Chicago: "Ethylene-Oxygen Anesthesia in Obstetrics."

Dr. M. Ecker, New York: "Ethylene-Oxygen Anesthesia in Dentistry."

These five papers were discussed by Drs. Carey Culbertson, Chicago; Herman L. Kretchmer, Chicago; Willard Bartlett, St. Louis; Isabella C. Herb, Oak Park, Ill.; J. S. Horsley, Richmond, Va.; E. D. Chipman, Washington, D. C.; Arno B. Luckhardt, Chicago; C. D. Leake, Madison, Wis.; N. S. Heaney, Chicago, and M. Ecker, New York.

The President, Dr. William Allen Pusey, the retiring President, Dr. Ray Lyman Wilbur, and the Speaker of the House of Delegates, Dr. Frederick C. Warnshuis, addressed the section.

Dr. F. H. McMechan, Avon Lake, Ohio, moved a rising vote of thanks to the speakers.

MEETING ON RADIOLOGY

THURSDAY, JUNE 12—MORNING

The meeting was called to order at 9 o'clock by the chairman, Dr. W. F. Manges, Philadelphia.

Dr. W. F. Manges, Philadelphia, read the chairman's address. No discussion.

Dr. P. M. Hickey, Ann Arbor, Mich., read a paper on "Roentgen-Ray Studies in Hydrocephalus." Discussed by Drs. George L. Davenport, Chicago; Henry K. Pancoast, Philadelphia, and P. M. Hickey, Ann Arbor.

Dr. W. Walter Wasson, Denver, read a paper on "A Radiographic Study of the Infant's Chest as Seen at Birth." Discussed by Drs. Oscar O. Miller, Valley Station, via Louisville, Ky.; E. H. Skinner, Kansas City, Mo.; H. K. Pancoast, Philadelphia; E. C. Samuel, New Orleans, and W. Walter Wasson, Denver.

Drs. L. R. Sante and Edwin P. Lehman, St. Louis, presented a paper on "Radiographic Localization of Lung Abscess with the Hirtz Compass: Preliminary Report." Discussed by Drs. Edwin S. Blaine, Chicago; W. H. Stewart, New York; David R. Bowen, Philadelphia; P. M. Hickey, Ann Arbor, Mich.; E. P. Lehman, St. Louis, and L. R. Sante, St. Louis.

Dr. Henry K. Pancoast, Philadelphia, read a paper on "The Importance of Careful Roentgen-Ray Investigations of Apical Chest Tumors." Discussed by Drs. William A. Evans, Detroit; Leon T. LeWald, New York, and Henry K. Pancoast, Philadelphia.

Dr. George W. Holmes, Boston, read a paper on "Some Observations on the Use of the Roentgen Rays in the Diagnosis of Pericarditis." Discussed by Drs. Paul Dudley White, Boston; H. J. Ullman, Santa Barbara, Calif., and George W. Holmes, Boston.

Dr. Louis Gregory Cole, New York, read a paper on the "Relative Value of Medical and Surgical Treatment in Gastric Ulcer." Discussed by Drs. R. I. Rizer, Minneapolis; Milton M. Portis, Chicago; C. F. Tenney, New York, and Louis Gregory Cole, New York.

Dr. Leon T. LeWald, New York, read a paper on "A Study of Thirty-One Cases of Complete Transposition of the Viscera, with Remarks on Etiology." Discussed by Drs. Edwin S. Blaine, Chicago, and Leon T. LeWald, New York.

The attendance at this meeting, as announced by the secretary, was 362.

FRIDAY, JUNE 13—MORNING

The meeting was called to order at 9:10 by the chairman, Dr. W. F. Manges, Philadelphia.

Drs. A. C. Ivy and B. H. Orndoff, Chicago, read a paper on "Studies on the Effect of Roentgen Rays on Glandular Activity; The Effect on Gastric Secretion of Exposure of the Abdominal and Thoracic Areas to Roentgen Rays; A Note on Roentgen Cachexia." Discussed by Drs. Charles L. Martin, Dallas, Texas; Claude Regaud, Paris, France; A. J. Carlson, Chicago, and A. C. Ivy, Chicago.

Dr. A. J. Desjardins, Rochester, Minn., read a paper on "The Reaction of Different Types of Abdominal Tumors to Irradiation." Discussed by Drs. George E. Pfahler, Philadelphia; I. S. Trostler, Chicago, and A. U. Desjardins, Rochester, Minn.

Dr. Henry Schmitz, Chicago, read a paper on "End-Results Observed in Carcinomas of the Uterine Cervix with Radium and Roentgen-Ray Therapy." Discussed by Drs. John F. McCullough, Pittsburgh, and H. H. Bowing, Rochester, Minn.

Dr. Albert Soiland, Los Angeles, read a paper on "The Use of Radium for Intra-Oral Cancer." Discussed by Drs. E. H. Skinner, Kansas City, Mo., and Edwin C. Ernst, St. Louis.

Drs. A. C. Christie, Thomas A. Groover and E. A. Merritt, Washington, D. C., presented a paper on "The Treatment of Hyperthyroidism by the Roentgen Ray: Results in One Hundred and Twenty-Five Cases." Discussed by Drs. Robert G. Allison, Minneapolis; R. I. Rizer, Minneapolis; W. F. Manges, Philadelphia; H. J. Ullmann, Santa Barbara, Calif., and A. C. Christie, Washington, D. C.

Dr. W. W. Watkins, Phoenix, Arizona, read a paper on "The Pathologic Basis for Irradiation of Tonsils." Discussed by Drs. Edwin S. Blaine, Chicago; Sanford M. Withers, Denver; H. J. Ullmann, Santa Barbara, Calif.; I. S. Trostler, Chicago; Edward E. Mansur, Jefferson City, Mo.; W. F. Manges, Philadelphia; W. P. Whittington, Asheville, N. C.; F. V. Martin, Michigan City, Ind., and W. W. Watkins, Phoenix, Ariz.

Dr. J. Shelton Horsley, Richmond, Va., chairman of the Council on Scientific Assembly, addressed the section.

Dr. I. S. Trostler, Chicago, moved that a rising vote of thanks be accorded Dr. Albert Soiland, Los Angeles, for his efforts toward establishing a section on roentgenology. Seconded and carried.

THE SCIENTIFIC EXHIBIT

The Scientific Exhibit of the Chicago Session was conceded to be the best and largest ever held. The location was ideal in respect both to light and to space, and, as the Committee on Awards stated, "the general arrangement, neatness, lighting and freedom from confusion should serve as a model for future exhibits." A distinct departure from preceding exhibits was the creation of special committees to demonstrate certain practical applications of pathology and medicine. The Committee on Morbid Anatomy, composed of local pathologists, demonstrated fresh material received daily from the Chicago hospitals and the bureau of animal industry at the stock yards. Leaning over the counters of this booth could always be found a group of interested physicians listening to the explanations of the pathologists. Likewise the committee on cardiology found ready response to the exhibit on the pathology of the heart and the clinical interpretation of various clinical instruments used in heart study. Practically every exhibit had a competent demonstrator present at all times, and in this way the charts, posters and displayed material formed the basis of many an interesting discourse on newer advances in medicine. The space for the Scientific Exhibit originally allotted could not accommodate all the material worthy of space, and therefore a Scientific Exhibit Annex was installed some 300 feet east on the pier. The total number of exhibits was sixty-six, some booths containing the work of as many as fourteen people. Whenever possible, the material presented was credited to the individual and not merely to an institution. The number of individuals who participated in the Scientific Exhibit was 140. In previous reviews it has been customary to describe the outstanding exhibits. Owing to the large number and general excellence of this year's exhibits, however, space does not permit such a description.

REPORT OF COMMITTEE ON AWARDS

Scientific Exhibit

The Committee on Awards reports:

The gold medal to E. J. Judah, Mayo Clinic, because of (*a*) originality, (*b*) method of presentation of museum specimens, and (*c*) completeness of the exhibit demonstrating thoroughly the pathology of gallbladder disease.

The silver medal to W. W. Duke, Kansas City, because of the completeness of the exhibit on "allergy."

The bronze medal to Benjamin Terry, Nashville, for the effort involved in his personal demonstration of pathologic material carrying a message to the mass of physicians.

The committee also awards the certificate of merit to the following:

Evarts Graham, Warren H. Cole and Grover H. Copher of the Washington University Medical School of St. Louis, Mo., for visualization of the gallbladder.

Indiana Child Hygiene Division, Board of Health, for exhibit of child health activities.

Ralph Major, University of Kansas, for study of effect of methylguanidin on blood pressure.

Northwestern University for exhibit of museum specimens illustrating important lesions of (*a*) heart and blood vessels, (*b*) gastro-intestinal tract, (*c*) kidney, and (*d*) the female sexual organs.

Section on Dermatology and Syphilology of the University of Pennsylvania for the excellence of the photographic reproductions.

The committee desires to commend the general arrangement, neatness, lighting and freedom from confusion of the scientific exhibit, and recommends it as a model for future exhibits. The committee has been particularly impressed by the fact that there have been competent demonstrators in charge of the respective exhibits and that the legends have been well printed, making the exhibits more valuable to the visitors.

The committee appreciated the work of the two special committees, the committee on cardiology and the committee on morbid anatomy. It feels that these features (which were not open to awards) deserve special praise. The committee would like to see such features continue.

The director of the scientific exhibit, Dr. Paul N. Leech, acting for the committee of the Board of Trustees, deserves unstinted praise from the committee for the part he has played in the general excellence of the exhibit.

URBAN MAES, Chairman.
JAMES EWING.
ROGER S. MORRIS.

THE MOTION PICTURE THEATER

The motion picture theater program, run in connection with the Scientific Exhibit, operated continuously during the session hours from noon to 5:30 on Monday, from 9 to 5:30 on Tuesday, Wednesday and Thursday, and from 9 to 3 on Friday. The motion picture theater was located just east of the Scientific Exhibit, and had accommodation for 1,000 people. Thirty-five speakers were scheduled for sixty-nine periods, which were either of fifteen, thirty or forty-five minutes' duration. So well did the speakers cooperate that the schedule was adhered to strictly all during the week except for a brief interruption Monday afternoon, due to the fault of installation of the projection apparatus. One unusual feature of the program was the electric stethoscope, whereby 500 people in the audience were able to listen clearly to the various abnormal heart and lung sounds of one patient sitting on the stage. The audience was generally about 750, though frequently there were audiences of a thousand or more.

REGISTRATION AT CHICAGO

The total registration at the Chicago Session was 7,819. Below are given two summaries, one by sections and one by states:

REGISTRATION BY SECTIONS

Practice of Medicine	2,685
Surgery, General and Abdominal	1,528
Ophthalmology	439
Obstetrics, Gynecology and Abdominal Surgery	445
Laryngology, Otology and Rhinology	384
Diseases of Children	383
Pharmacology and Therapeutics	28
Pathology and Physiology	150
Stomatology	47
Nervous and Mental Diseases	187
Dermatology and Syphilology	146
Preventive and Industrial Medicine and Public Health	204
Urology	221
Orthopedic Surgery	126
Gastro-Enterology and Proctology	101
Meetings on radiology and anesthesia	227
Miscellaneous	518
Total	7,819

REGISTRATION BY STATES

Alabama	36	Nevada	5
Arizona	9	New Hampshire	7
Arkansas	35	New Jersey	27
California	122	New Mexico	11
Colorado	86	New York	265
Connecticut	25	North Carolina	23
Delaware	1	North Dakota	15
District of Columbia	47	Ohio	400
Florida	19	Oklahoma	55
Georgia	40	Oregon	20
Idaho	11	Pennsylvania	250
Illinois	3,224	Rhode Island	4
Indiana	475	South Carolina	12
Iowa	330	South Dakota	26
Kansas	80	Tennessee	103
Kentucky	108	Texas	152
Louisiana	46	Utah	18
Maine	7	Vermont	4
Maryland	47	Virginia	30
Massachusetts	91	Washington	34
Michigan	363	West Virginia	45
Minnesota	207	Wisconsin	407
Mississippi	32	Wyoming	7
Missouri	270	Miscellaneous	67
Montana	9		
Nebraska	112	Total	7,819

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SATURDAY, JUNE 21, 1924

FAVORITE VEGETARIAN FOODS

Protein is the most important organic component of the tissues of the body. It is an integral part of the protoplasm that forms the physical basis of the functions of living organisms. Cells are continually being destroyed and reconstructed; a sort of wear and tear disintegration is going on in the body, and nutrition aims to make good the losses. Obviously, fats and carbohydrates cannot replace the nitrogenous components and suffice to preserve the integrity of the tissues that are in this state of physiologic flux. Hence, the dominant position that proteins have come to occupy in discussions on nutrition. The pendulum of enthusiasm regarding the biologic significance of proteins has swung from one extreme to another. Liebig inculcated the doctrine that the muscles do their mechanical work at the expense of the energy stored in them in the form of proteins; the latter inevitably attained an enormous importance in the light of such an hypothesis, particularly when muscular activity was concerned. In recent years, since the untenability of the teachings of Liebig in respect to the sources of energy in muscular work has been established, there has been a tendency in some quarters to advise abstemiousness with respect to proteins. Thus, we are told [1] that if for no other reason than that of economy, it is unpractical to make use of more protein than is necessary for the maintenance of the body in full health and vigor. The richly albuminous foodstuffs are by far the most expensive, so the argument continues, and it is therefore sheer extravagance to squander the housekeeping money on a superabundance of protein.

In all this debate through the years of changing opinion, there has been more or less tacit assumption that proteins are for the most part essentially of equal biologic value, whatever their source or their mode of preparation. In the compilations of thousands of analyses of foods that have been published in the last thirty or forty years, the protein content has been "estimated" on the basis of the amount of nitrogen present, this element forming about 15 per cent. of the albuminous substances. Discussion has centered on quantities of nitrogen or (calculated) protein in foods, rarely on the quality of the protein constituents. Of course, there have been exceptions to this almost universal procedure. Differences in digestibility, and consequent alimentary availability of some protein substances, have long been recognized, and the artificial product gelatin, in particular, has been understood since the days of the Second Gelatin Commission in France to be "inadequate" as the sole source of nitrogen for the organism.

Increasing knowledge of the amino-acid make-up of proteins, the indispensability of certain amino-acids for physiologic purposes, and the inability of the body to construct them anew has placed the protein factor in nutrition in a new light.[2] An interesting application of this has arisen in connection with the study of certain legumes. The latter have long occupied a preeminent place in the vegetarian dietary, in which they have been heralded as the carriers of unusual amounts of protein, in contrast to the cereal grains that are less rich in this foodstuff. Peas and beans, for instance, are outstanding among foods of plant origin in their comparatively high content of protein. It was a matter of surprise, therefore, several years ago, when Johns and his collaborators [3] in the Bureau of Chemistry, Washington, demonstrated convincingly that the navy bean yields comparatively little of the sulphur-containing amino-acid cystin, and that the latter must be supplied in some way if the proteins of beans are to be made adequate as the sole source of protein in the diet. Jones and Murphy [4] have made essentially the same sort of observations in regard to the proteins of the common lentil, *Lens esculenta*. This is probably one of the first plants brought under cultivation by man, and has been found in the ancient lake dwellings of St. Peter's Island, Lake of Bienne, which are of the bronze age. This seed is extensively used for food in all countries in which it is grown, and is popularly regarded as being very nutritious. Although grown to a smaller extent in the United States than in many other countries, considerable quantities are imported annually.

These legumes are not entirely devoid of dietary virtues. They are a good and practical source of vitamin B; and lentils are apparently much richer in vitamin A than most other seeds have been found to be. The proteins need only to be properly supplemented to place them in a category of more desirable protein nutrients. The familiar combinations of pork and beans or of lentils and smoked beef represent

1. Hindhede, M.: Protein and Nutrition, London, 1913, p. 3.

2. McCollum, E. V.: The Newer Knowledge of Nutrition, New York, 1922. Mendel, L. B.: Nutrition: The Chemistry of Life, New Haven, 1923.

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dietary wisdom acquired before the age of nutrition experiments in laboratories. Nevertheless, it may be worth while to emphasize the latest dictum that, as man cannot live by bread alone, so he cannot survive on an exclusive regimen of legumes. The latter are rendered far more digestible by thorough cooking—a fact too often unheeded; and they gain still further in nutritive value when they are provided with suitable companionship in the day's menu.

ESSENTIAL AMINO-ACIDS

In the physiology of nutrition of the present day, the proteins have acquired a significance quite different from that attached to them a generation ago. They are no longer referred to merely as the indispensable sources of nitrogen in the diet—as highly complex nitrogenous nutrients that somehow are transformed and reconstituted into the protein framework of the tissues of the body or distributed to the mobile fluids of the organism. Today the proteins are evaluated primarily as sources of the well defined amino-acids that they yield. The latter are the real "building stones," or units, out of which the bodily protein structures are put together. As Mendel [1] has recently summarized the current view, many, if not all, of these amino-acids are essential for the construction of tissue and the regeneration of cellular losses. In the proportion that any specific protein can furnish these constructive units, it may satisfy the nutritive needs of the body. The efficiency of the individual protein in this respect must depend on the minimum of any indispensable amino-acid that it will yield; for it is now known that some of them cannot be synthesized anew by the animal organism. If, for example, a protein or mixture of proteins comparatively deficient in their yield of the sulphur-containing amino-acid cystin is furnished alone to supply the body's nitrogenous requirements, the production of new, cystin-yielding molecules of protein will be limited by the amount that is available in the diet. An excess need not be wasted, for it can be burned up like sugar or fat to provide energy; but new construction or growth is limited by the minimum of the essential unit.

The demonstration that the organism depends on extraneous, or exogenous, sources of various nutritive factors has begun to make a profound impression on those who deal with the problems of maintaining the body in health and efficiency. We are repeatedly being reminded that certain vitamins must be provided if nutritive welfare is to be conserved. They cannot be manufactured by the cells or organs of the individual. There are also inorganic elements that are needed without fail. Shortage of lime or phosphorus must be averted at all times by an adequate supply, the requirement varying widely with the varying coexistent demands of growth, pregnancy or lactation, for example. Iodin cannot be overlooked in the rationing of man, even though the need may be expressed in figures of seemingly insignificant smallness.

Likewise, all of the essential amino-acids that cannot be synthesized de novo in the animal organism must be furnished in some potentially available form at least. The experience of generations of mankind has shown that the danger of a failure in this respect is comparatively small, so long as customary dietary habits are pursued. During the food discussions incident to the World War, stress was usually laid on the energy or calory value of the food, on the assumption that if any reasonable kind of combination of foods is consumed it will be found that, if taken in the amount necessary to afford the energy value, sufficient protein will be contained in it without further addition. Natural foods, even potatoes, contain more protein than is often supposed to be the case; and no one is likely to consume pure sugar, starch or oil as the sole articles of diet. Hence the slogan formulated by Bayliss; [2] "Take care of the calories, and the protein will take care of itself."

Nevertheless, the question of the "quality" factor in proteins is not so easily cast aside. The recent discussions, for example, of the causation of pellagra revert both here and abroad to this protein feature. It is imperative scientifically, and perhaps also for purely practical considerations, that the category of the truly indispensable amino-acids be established securely. For several, the answer already seems to be definite. Cystin, tryptophan and lysin must be furnished in some form in the diet by which they can become available. How highly specific such needs are has been indicated by Lewis [3] and his co-workers, who have observed that even closely related chemical compounds cannot replace lysin in the intake. Sure [4] has shown that tryptophan, which is indol-alanin, cannot be synthesized even when the components indol and alanin replace it in the diet. And now Rose and Cox [5] of the University of Illinois have furnished evidence for the indispensability of histidin, likewise demonstrating that, contrary to earlier assumption, arginin and histidin are not mutually interchangeable in metabolism. Such highly important information may seem at present to be far removed from the daily work of the physician; yet who shall deny that it may not become an essential of his routine information in the days to come? We still know all too little about the fundamental physiology of the body. Perhaps our predecessors were wiser when they dignified this subject with the name of the "institutes of medicine."

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Current Comment

EXPLOITING THE CANCER SUFFERER

The week of the annual session of the American Medical Association was chosen as a propitious time to resurrect two discredited "cancer cures." At the beginning of the week, a Philadelphia paper announced that the cause of cancer had been discovered and that a treatment for the disease had been evolved that was producing remarkable results. This particular piece of publicity dealt with the alleged cancer serum of Dr. T. J. Glover of Toronto. Glover's "serum" and its method of commercial exploitation were the subject of two or three articles that appeared in THE JOURNAL in the early part of 1921. It was there shown that a special committee appointed by the council of the Academy of Medicine of Toronto had investigated the Glover serum and reported that it was unable to find any evidence to show that the serum had produced a cure in any case definitely established as cancer. About the same time, Dr. Francis Carter Wood, director of cancer research at Columbia University, reported that he had subjected the Glover cancer serum to tests and had found not the slightest evidence that the product had any effect on the growth rate of tumors, nor had it cured any tumor. The second "cancer cure" to be exploited last week was that of Dr. William F. Koch of Detroit. Koch's nostrum was brought to the attention of the newspapers of the country by one C. Everett Field in a statement made before the "American Association for the Study and Cure of Cancer," a newly formed organization that must not be confused with the well established American Society for the Control of Cancer. Koch's cancer "cure" was dealt with in two articles that appeared in THE JOURNAL during February, 1921. It was there brought out that Dr. Koch announced his alleged "cure" less than a year after he was graduated in medicine. The committee appointed by the local medical society at that time made two reports, both unfavorable to the "cure." Since the committee reported, the Koch "cure" has been exploited by a "sanitarium" of which Koch is the "medical director." The "sanitarium" sends out to the public a typical "cancer cure" advertising booklet: statements derogatory to the treatment of cancer by surgery, radium and roentgen rays; quotations (at least one of which is fictitious) from alleged authorities to support Koch's thesis; a statement of Koch's theory regarding cancer and some noninformative statements about the remedy; finally, the usual farrago of alleged case reports. The publicity just given to these two discredited "cures" is producing the usual effect. Sufferers from cancer both directly and through their physicians are frantically trying to learn whether there is any warrant for the claims so carelessly broadcast. There may be things more heartless than that of exploiting the sufferers from so dreaded a disease as cancer, but at this time we do not think of them. The most pernicious feature connected with such exploitation is that of awakening false hopes in the minds of the sufferers. The mental anguish thus caused is just as great whether the "cure" is fraudulent in both its inception and its exploitation, or put forward by honest but misguided enthusiasts. So far as the "cures" of William F. Koch and T. J. Glover are concerned, it cannot be too earnestly asserted that neither one is in any sense established as either scientific or reliable.

U. S. SUPREME COURT ON MEDICINAL USE OF MALT LIQUORS

The constitutional principles underlying the regulation of the prescribing and dispensing of alcoholic liquors for medicinal purposes have been succinctly stated by the United States Supreme Court in two recent cases.[1] Certain makers of malt beverages—beer, etc.—brought suit to enjoin the Commissioner of Internal Revenue and other federal officers from enforcing the provisions of the amended National Prohibition Act, prohibiting the prescribing of beer for medicinal purposes. The suit was based on the grounds that the Eighteenth Amendment authorizes Congress to prohibit traffic in only such intoxicating liquor as is intended for beverage purposes, and that the control of liquor for medicinal purposes is reserved to the several states; that while Congress can regulate the sale of medicinal liquor, it cannot prohibit medicinal liquor; that the prohibition of beer for medicinal purposes is neither an appropriate nor a reasonable exercise of the power conferred on Congress by the Eighteenth Amendment, but infringes on the legislative powers of the states. The Supreme Court, however, denied all these claims and affirmed the decree of the court below, dismissing the suits.

The Supreme Court points out, in its decision, that the Constitution confers on Congress the power to make all laws necessary and proper for carrying into effect all powers specifically vested in it. Such implied power, the court says, is not limited to measures indispensably necessary, but Congress may adopt such means as it believes best adapted to the ends to be accomplished. The court points out that the sale of beer for medicinal purposes may permit clandestine traffic and thus hamper and obstruct the enforcement of prohibition. Furthermore, it is emphasized that the hearings before the enactment of the law did not show that beer possesses medicinal properties. If Congress can prohibit the manufacture and sale of beer for medicinal purposes, it may presumably prohibit the sale of wines and whisky as well, and limit the sick to pure alcohol as a remedial agent. In view of the extent to which the court concedes discretion with respect to these matters to Congress, it seems at least questionable whether the sick who are in need of alcoholic liquors in excess of the amounts now allowed by law can expect relief from the courts; if relief is to be obtained, it will probably have to come directly from Congress. It will be well, therefore, for physicians to begin at once to look toward the introduction of reasonableness into the National Prohibition Act, so far as it relates to the medicinal use of beer and other

1. Everard's Breweries v. Prohibition Director; Edward & John Burke, Ltd. v. Commissioner of Internal Revenue; decided, June 9, 1924.

liquors. It was the opinion of the House of Delegates at the session just concluded that the medical profession should direct its efforts toward this end.

THE CHICAGO SESSION

When the American Medical Association met in Chicago in 1908, the total registration was 6,446, a record unequaled until the present session, at which 7,819 registered. For this magnificent registration, credit must be given first to the local committee, which secured a high percentage of attendance of physicians in Chicago, and secondly to the great interest aroused by the numerous special features included in the 1924 session. The experiment with the municipal pier, which involved making over the second tier into exhibit halls and meeting places for the sections, was quite successful. Minor difficulties in the way of ventilation and the transmission of sound interfered in some instances with the larger halls, but the general satisfaction resultant on the ease of access to the exhibits and the ability to go rapidly from one meeting place to another outweighed such defects. The Scientific Exhibit, as is reported elsewhere in this issue, far surpassed any previous one conducted by the Association. Several special exhibits were the means of conveying to those interested the latest advances in the fields of pathology and in the prevention and relief of heart disease. Commercial exhibitors were more than satisfied because of the large attendance and because the arrangements were such as to permit Fellows to pass through the exhibit on their way to attend the meetings of the Scientific Assembly. The meetings of the scientific sections were attended by large numbers at all sessions. Some of the halls provided seats for as many as 1,200 physicians, and yet were crowded to capacity. Much credit is due especially to the local committee on arrangements for the excellent appointments connected with the attention given to entertainment for guests, in providing hotel facilities adjacent to the pier, and particularly for the luxurious arrangements of the President's reception.

WILLIAM D. HAGGARD, M.D.
PRESIDENT-ELECT OF THE AMERICAN MEDICAL ASSOCIATION

THE PRESIDENT-ELECT

When the American Medical Association met in San Francisco in 1923, the House of Delegates indicated by a remarkably close vote its choice between Dr. William A. Pusey and Dr. William D. Haggard for the presidency of the Association. At the meeting held in Chicago this year, Dr. William D. Haggard was elected to the presidency for 1925 with a large majority. The President-Elect was born in Nashville, Tenn., Sept. 28, 1872, the son of Dr. William David Haggard and Jane Douglas. He received his medical degree from the University of Tennessee in 1893, and has practiced in Nashville since that time. Dr. Haggard is professor of surgery in the Vanderbilt University, Nashville; one of the practicing surgeons in the Vanderbilt Hospital, and first president of the staff of St. Thomas Hospital. He was instrumental in organizing the American College of Surgeons, and served that organization for a number of years as regent. He was formerly president of the Tennessee State Medical Society, secretary of the Southern Surgical Association, and its president in 1917. It is interesting to know that his father was the first president and one of the founders of the Southern Surgical Association. In the American Medical Association, Dr. Haggard was chairman of the surgical section in 1917, and a member of the Council on Medical Education from 1910 to 1920. When war was declared, he was appointed by Surgeon General Gorgas on the Advisory Board in the Division of Surgery, and was on duty in the Surgeon General's Office at Washington. During the World War he served as major and lieutenant-colonel in the Medical Corps, U. S. Army, and acted as surgeon to Evacuation Hospital No. 1, at Toul, France, and later as consultant in surgery at the Mesves Hospital Center. Before going overseas, he served as medical aide to the governor in the organization and supervision of the medical advisory boards under the selective service act. His election may be considered a recognition of medicine in the South, of his service in the advancement of medical education, and of the qualities of leadership and congeniality which he possesses.

CONGRESS, THE DOCTOR

Without a dissenting vote, the House of Delegates of the American Medical Association adopted last week a resolution calling on the Board of Trustees to use its best endeavors to have repealed such sections of the national prohibition acts as may interfere with the proper relation between the physician and his patient in prescribing alcohol medicinally. The resolution has been greeted by the press of the country with general approval. Most of the Chicago newspapers have already expressed themselves editorially, and the following statements represent their general attitude:

Physicians who object to the provisions of the Volstead act regulating the use of alcohol in the practice of medicine are unanswerable. If the law allows a physician to prescribe spirits for a patient, as it does, the dosage is entirely a matter for the physician's judgment and not for congress to prescribe.

The law adopts a principle which makes congress the doctor. The arbitrary dictum is that a patient may be given a pint of whisky every ten days as medicine, but no more, regardless of the opinion of the doctor in the case.

Congress might have declared that whisky had no medicinal value. Some physicians hold that it has no peculiar medical value. Others contend that it has. In practice they can follow their own opinions. They will all agree that if it has value the doctor who prescribes it at his own discretion should have discretion as to the amount.

Congress went on the assumption that the medical profession would misuse the prescription blanks. The drys decided that the person who violated the intent of the law and got whisky as a beverage because it was legalized as a medicine should have just as little satisfaction out of it as possible. Of course they did not reach the man they intended to reach. The unscrupulous physician has no difficulty with this limitation. He has many expedients by which it can be avoided. The scrupulous physician finds that his practice is controlled by a law which affronts both his intelligence and his honesty.

It is an absurd theory that congress may substitute itself for the physician in the treatment of disease, and it is no wonder that many physicians resent such an ignorant and dictatorial interference with medical practice.—Chicago *Tribune*.

The eighteenth amendment is directed solely against the use of liquor as a beverage, and whether the medical clauses of the Volstead law are valid is a question not yet dealt with by the federal Supreme Court.

Some physicians, it is true, yield to the temptation to prescribe liquor where it is unnecessary, and not a few have permitted themselves to become bootleggers in disguise. But Volsteadism, with its sequels and supplements, has not prevented unscrupulous abuses and never will entirely prevent them. The medical profession should purge itself of immoral and dishonorable elements, and its efforts in that direction would be stimulated by a congressional policy of confidence toward it. The honorable physician is hampered by Volsteadism, while the charlatan is not even inconvenienced.

The modification of the prohibition statutes demanded by the medical profession would not obstruct proper enforcement of national prohibition. On the contrary, it would tend to facilitate enforcement.—Chicago *News*.

It has long been recognized that legislation is just as likely to follow public emotion as it is to be guided by scientific knowledge. This fact was excellently expressed by Chief Justice Oliver Wendell Holmes in "The Common Law," when he said:

The life of the law has not been logic; it has been experience. The felt necessities of the time, the prevalent moral and political theories; institutions of public policy, even the prejudices which judges share with their fellow men, have had a good deal more to do than the syllogism in determining the rule by which men should be governed.

The action of the House of Delegates and the general approval given to it by the public as expressed through the press are indications of a healthful reaction against enactments and regulations which have recognized, in their formulation, popular prejudice rather than scientific fact.

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

CALIFORNIA

Paroled Convict Wanted.—Louis A. D'Angoise, a paroled convict from San Quentin prison, is wanted by the state authorities, charged with practicing medicine without a license and with passing worthless checks. D'Angoise was convicted several years ago for forgery, it is reported, and in prison served as a nurse. He recently endeavored to establish a "goat gland clinic" in Los Angeles, and was stopped when checks with which he attempted to pay for luxurious office furniture were found to be worthless. Some of his patients have been very ill since submitting to D'Angoise's treatment, for which one at least paid him $400. He tried to have another patient sign checks for $200, May 25, and that was the last seen of him, according to the special agent of the state board of medical examiners.

Appropriation for State Hospitals.—The appropriation of $1,000,000, made for the state hospitals this year, will be distributed among all the seven state institutions. The Sonoma State Home, Eldridge, will have two buildings erected which will cost $200,000; an addition to the main building will be made at the Mendocino State Hospital, Talmage, to cost $120,000, and a new $60,000 building will be erected. There will be other improvements, as follows: at the Napa State Hospital, Imola, a building for 120 patients, to cost $200,000; Stockton State Hospital, Stockton, three buildings, to cost $300,000; Norwalk State Hospital, Norwalk, two additions, to cost about $240,000; Southern California State Hospital, Patton, four buildings, to cost $320,000; and at the Agnew State Hospital, a school building and a wing for attendants will be erected.

CONNECTICUT

Society News.—Dr. Louisa Martindale of London, England, was a guest of the Connecticut Medical Women's Society at a meeting at Hartford, May 28. Dr. Martindale discussed the status of medical women in Great Britain.——At the one hundred and thirty-second annual meeting of the Fairfield County Medical Society at Bridgeport, April 8, Dr. Frank H. Coops, Bridgeport, was elected president, and Dr. Henry C. Sherer, South Norwalk, vice president.

GEORGIA

Village Honors Veteran Physician.—The entire 450 inhabitants of Concord turned out recently to an old fashioned southern barbecue to honor Dr. Roger A. Mallory, who has practiced in that village for forty years. About twenty-five physicians and their families from neighboring towns also attended. Dr. Mallory was presented with a gold watch and charm.

ILLINOIS

Better Baby Conferences.—A total of thirty-two better baby conferences have been scheduled by the state department of public health to take place during the next three months, most of which will be held in connection with county fairs. The state furnishes a limited amount of professional service that renders organization and advisory assistance; local talent is depended on to actually carry out the conferences. The state also furnishes such supplies as appointment and score cards, and literature.

Smallpox.—Between March 1 and June 14 of this year 513 cases of smallpox with more than a dozen fatalities have been reported in Illinois, while only 250 cases were reported

during the corresponding period of 1923 and only one death from smallpox for the entire year was recorded. Up until June 1 the smallpox outbreaks were confined largely to very limited areas, but since that time epidemics have appeared throughout the state, affecting especially the counties of Cook, Douglas, Franklin, Lake, McLean, Madison, Rock Island and Whiteside.

Chicago

Personal.—Dr. Frank Billings was awarded the honorary degree of LL.D. at the recent convocation at the University of Cincinnati.

Society News.—At the recent meeting of the Chicago Society of Industrial Physicians, Dr. J. Chase Stubbs was elected president; Dr. William C. Meacham, vice president, and Dr. Horace C. Lyman, secretary-treasurer.

IOWA

Dr. Howard Resigns.—Dr. Campbell P. Howard, head of the department of internal medicine, State University College of Medicine, Iowa City, has tendered his resignation in order to accept the professorship of medicine at his alma mater, McGill University Faculty of Medicine, Montreal.

County Medical Society Establishes Clinic.—The Woodbury County Medical Society has established a clinic at 209 Third Street, Sioux City, to treat those who are unable to pay for medical service. Forty physicians and a nurse are in attendance. There are nine departments in the clinic, and 337 patients were treated during the month of April.

LOUISIANA

Society Makes Appropriation for Walter Reed Memorial.—The local arrangement committee of the New Orleans meeting of the Louisiana State Medical Society appropriated $400 to the Walter Reed Memorial Fund. The by-laws were amended whereby surplus money remaining in the annual arrangement fund each year should be turned over to the Committee on Walter Reed Memorial up to the time that such fund reaches $2,000, after which it shall be returned to the general fund of the state secretary.

MARYLAND

Appropriation for Hospitals for Insane.—The general assembly this year has appropriated $667,000 for the state hospitals for the insane and feebleminded. New structures will be erected at all the state hospitals. At Springfield, a building increasing the capacity of the hospital by fifty beds and costing $142,000 will be erected; at the Spring Grove Hospital, a wing to the Foster clinic, which will accommodate 100 patients and cost $225,000, will be erected, and provision for 100 additional feebleminded children at the Rosewood state training school by erecting a $100,000 dormitory will be made.

Appointments and Promotions at Johns Hopkins Medical School.—Dean Lewis H. Weed of the Johns Hopkins University Medical Department announced the following appointments and promotions, June 14:

Dr. John W. McNee, associate professor of medicine, University College Hospital Medical School, London, Eng., to be associate professor of medicine; Dr. Bela Halpert, assistant professor to Prof. Otto Grosser, University of Prague, Czecho-Slovakia, to be instructor in anatomy; Dr. Henry M. Thomas, Jr., promoted to associate professor in clinical medicine; Dr. Bertram M. Bernheim to associate professor in clinical surgery; Dr. Richard S. Lyman to associate professor in psychiatry; Dr. DeWitt B. Casler to associate professor in clinical gynecology; Francis H. Swett, Ph.D., to associate professor in anatomy; William A. Perlzweig, Ph.D., to associate professor in medicine; Dr. Paul G. Shipley to associate professor in pediatrics. Dr. Wilburt C. Davison, associate professor of pediatrics at the Johns Hopkins Medical School, has been appointed assistant dean of the medical school, an office recently created which will permit Dr. Weed more time for research in anatomy. Dr. Davison received his degree from Johns Hopkins in 1917, after having studied at Princeton, and at Oxford, as a Rhodes scholar. He will continue to be assistant professor of pediatrics.

MASSACHUSETTS

Promotions at Harvard.—The following promotions in the faculty of the Medical School of Harvard University, Boston, were announced recently: Dr. Frederick H. Verhoeff, to be professor of ophthalmic research; Dr. Edwin H. Place, to be clinical professor of pediatrics; Dr. Joseph T. Wearn, to be assistant professor of medicine; Dr. Robert M. Green, assistant professor of applied anatomy; Dr. Frederick S. Burns, assistant professor of dermatology, and G. Benjamin White, Ph.D., to be assistant professor of bacteriology and immunology, and preventive medicine and hygiene.

MICHIGAN

Smallpox in Detroit.—The smallpox situation in Detroit is improving, according to reports of June 3. Five new cases and one death were reported, June 1, making a total of 1,341 cases and 109 deaths since January 1. In May, 527,100 persons were vaccinated in Detroit. Dr. Henry F. Vaughan is reported to have said that there are yet 200,000 persons in the city who require vaccination.

MINNESOTA

Women Interns Admitted.—The General Hospital, Minneapolis, heretofore has not admitted women as interns, on the ground that they were not physically fitted for much of the work. This policy has been changed, and women interns are now admitted to that hospital.

Contract to sell Practice Can Be Enforced.—The supreme court of Minnesota has decided that a contract made between two physicians, one of whom is employed by the other for a definite term and agrees not to enter practice in the same city or within reasonable distance from it and within a reasonable term of years, can be enforced by injunction. The *Journal-Lancet* says that this principle would hold in case one physician sells his practice (good will) within reasonable time and distance from the home or office of the physician purchasing the practice.

MONTANA

Great Falls Applies for Health Center.—The city of Great Falls has sent a request to the headquarters of the American Child Health Association, New York, requesting that the child health center to be established in the Far West be located there (THE JOURNAL, June 7, p. 1873).

NEBRASKA

Academy Election.—At a meeting of the Nebraska Academy of Ophthalmology and Oto-Laryngology in Omaha, May 12, Dr. S. E. Cook, Lincoln, was elected president; Dr. H. B. Lemere, Omaha, vice president, and Dr. Clarence Rubendall, Omaha, secretary.

Postgraduate Course for Practitioners.—The fifth annual postgraduate course for practitioners under the auspices of the University of Nebraska College of Medicine, Omaha, will be given June 16-28. The course consists of practical exercises, demonstrations and bedside work. The facilities of the University Hospital and the outpatient department will be available.

NEW JERSEY

State Medical Meeting.—At the one hundred and fifty-eighth annual meeting of the Medical Society of New Jersey, Atlantic City, June 5-7, the following officers were elected for the ensuing year: president, Dr. Alexander MacAlister, Camden; vice presidents, Drs. Archibald Mercer, Newark, Lucius F. Donahue, Bayonne, and James S. Green, Elizabeth; corresponding secretary, Dr. William J. Carrington, Atlantic City; recording secretary, Dr. John Bennett Morrison, Newark, and treasurer, Dr. Elias J. Marsh, Paterson.

NEW YORK

Change in Lunacy Law.—Among the amendments passed by the last legislature was one changing the law with reference to the appointment of lunacy commissions. The amendment provides that alleged insane criminals are to be sent to the observation ward of Bellevue Hospital in Manhattan and to that of the Kings County Hospital in Brooklyn, and their mentality tested by two physicians there appointed by the commissioner of public welfare. County judges and supreme court justices no longer have the power to appoint lunacy commissions to test the mentality of alleged insane criminals, in this state.

Physicians' Life Insurance Rate Increased.—The three-year agreement between the Medical Society of the State of New York and the Aetna Life Insurance Company, whereby physicians could secure liability insurance for limited policies with no exclusions for special hazards at the rate of $18 annually, has been revised on a year to year basis with an increase in the rates. Under the new agreement, the rate for the same limits as allowed in the previous agreement will be $24 annually, and the policy excludes liability for roentgenray and radium therapy. If a physician desires these risks covered, it will be done by indorsement at an additional premium, it is reported, of $75 annually. The new agreement

was reached after a study by the insurance company's officers, and the attorney for the medical society.

Certified Milk Causes Paratyphoid Epidemic. — The State Department of Health announces that an epidemic of gastro-enteritis which recently occurred at New Rochelle was apparently paratyphoid fever transmitted through milk from a certified dairy. Each of the fifty patients investigated is said to have used certified milk produced by a single dairy. Forty-nine of these patients were under six months of age; the remaining patient was forty years old, and, having a gastric ulcer, was on a special diet which included this certified milk. *Bacillus paratyphosus* B was found in the stool of some patients, and in one employee of the dairy; one of the active cases in the epidemic was this employee's child. Early in the investigation a cow from this dairy was found which had an acute mastitis, from which a streptococcus hemolyticus was isolated. The subsequent finding of the paratyphoid bacillus not only explains the probably real cause of the epidemic, but emphasizes, the health department says, the necessity for thorough and complete information before arriving at definite conclusions regarding the source of any epidemic.

New York City

Diphtheria Clinic in Brooklyn.—The third diphtheria prevention clinic has been opened in the Williamsburg section of Brooklyn at 134 Broadway, under the direction of the department of health, the board of education and the Metropolitan Life Insurane Company. Dr. May C. Schroeder of the department of health is in charge.

Hospital Installs Gas Apparatus.—Apparatus for the administration of chlorin gas has been installed at the New York Post-Graduate Medical School and Hospital. This form of treatment will be employed in certain classes of infections of the respiratory tract in an effort to confirm the findings of Drs. Vedder and Sawyer of the Army Medical Corps.

Scarlet Fever Serum Available. — The health department announces that through the cooperation of the bureau of laboratories and the bureau of preventable diseases it is possible now to offer Dochez serum treatment to scarlet fever contacts. Children exposed to scarlet fever will be visited by a physician from the research laboratory, who with the approval of the family physician will administer the serum. Physicians are urged to utilize this service.

NORTH CAROLINA

Allowance for Quarters at Government Hospital Stopped. —The comptroller of the treasury has ruled, it is reported, that about thirty physicians on duty at the Veterans' Bureau hospital at Oteen are not entitled to the allowance for quarters, holding that living quarters are available at the hospital. This means a reduction in salary of $60 a month for lieutenants and $80 a month for captains, or moving back to the hospital quarters erected for temporary occupancy during the war, and said now to be undesirable.

OHIO

Clinic for Crippled Children.—A diagnostic clinic for crippled children under the auspices of the state board of health, the Ashtabula County Medical Society, and the Conneaut, Ashtabula and Geneva Rotary Clubs was conducted at Ashtabula, May 29, by Dr. Walter G. Stern, Cleveland. Ninety-four crippled children attended the clinic.

Hospital Reorganizes.—During the construction of the $200,000 additions to the Peoples Hospital, Akron, including an obstetric wing of forty beds, a heating and lighting plant and an addition to the nurses' homes, the staff has been reorganized. The departments now include medicine; surgery; obstetrics; eye, ear, nose and throat; anesthesia; proctology; orthopedics; pathology, and roentgenology. There are thirty-three members on the active staff, of which Dr. James G. Blower is chief, Dr. David W. Stevenson, assistant chief, and Dr. Morris C. Tuholske, secretary.

OKLAHOMA

Freshman Class at University Filled.—The freshman class at the Oklahoma University Medical School for the year 1924-1925 is already filled, and from the seventy-five names under consideration fifty will be selected. More than seventy-five applications for admittance have been refused, and no further applications for enrolment will be received, according to the assistant dean. Only Oklahoma students have been considered. A new medical school building will be completed about the first of the year, when it is expected that a larger number of students can be accommodated.

OREGON

State Medical Meeting.—At the annual meeting of the Oregon State Medical Society, May 27-28, at Portland, the following officers were elected for the ensuing year: president, Dr. Alfred C. Kinney, Astoria; president-elect, Dr. Paul Rockey, Portland; vice presidents, Drs. Ralph Fenton, Portland, Leo B. Bouvy, La Grande, and George E. Dix, Marshfield; secretary, Dr. Courtland L. Booth, and treasurer, Dr. Ralph C. Walker, Portland. Dr. Kinney was the first president of this society fifty years ago.

PENNSYLVANIA

Pennsylvania Wins Pennants in Health Tournament.— Eighteen pennants were won by Pennsylvania schools in the National Tournament in Health Knighthood during the first half of the school year of 1923-1924. Eleven were awarded to schools in the territory of the Shamokin Tuberculosis Committee and the other seven to schools in the jurisdiction of the Anti-Tuberculosis Society of Schuylkill County. This is the second year that schools in Shamokin have won pennants.

Prosecute Faith Pastor for Diphtheria Deaths. — It is reported that Edwin Winterborn, pastor of Faith Tabernacle, Lebanon, will be prosecuted for violation of the health laws in connection with the recent epidemic of diphtheria among members of that congregation which resulted in the death of one adult and eight children in less than a month. These patients refused to accept medical aid. Disregarding the objections of the faith healers, the local health authorities finally compelled those affected and contacts to submit to treatment, and no deaths from diphtheria since then have occurred. Winterborn is charged, it is said, with failing to observe the vaccination law in admitting children to his private school.

Philadelphia

Shortage of Nurses.—A special meeting of the Philadelphia County Medical Society, which numbers 1,700 members, was called, May 21, to consider steps to relieve what is said to be an alarming shortage of nurses in Philadelphia. For the last six months a special committee of the county medical society, with Dr. S. Lewis Ziegler as chairman, has been investigating nursing conditions.

New Bronchoscopic Clinic.—Dr. Wilmer Krusen, director of public health, announced, June 6, that a bronchoscopic clinic is to be established in the Philadelphia General Hospital. This clinic will be a duplication of the same resources as now maintained in the Jefferson Hospital and Dr. Chevalier Jackson and his assistant Dr. William F. Moore of the Jefferson will serve as consultants.

Medical College Commencements.—The seventy-second annual commencement of the Woman's Medical College of Pennsylvania was held June 4. Dr. Louisa Martindale, president of the London Branch of the British Federation of Medical Women, delivered the graduating address. There were thirty-two graduates.——One hundred and forty-five men received the degree of Doctor of Medicine at the ninety-ninth annual commencement of the Jefferson Medical College in the Academy of Music, June 6 Twenty-five of these received commissions as first lieutenants in the Medical Reserve Corps of the U. S. Army, making the second group of Jefferson students to be commissioned. Hon. William Potter, president of the board of trustees, presented the diplomas and Dr. Emory William Hunt delivered the commencement address.

RHODE ISLAND

State Medical Meeting. — At the annual meeting of the Rhode Island Medical Society in Providence, June 5, Dr. William F. Barry, Woonsocket, was elected president; Drs. Halsey De Wolf and Herbert G. Partridge, Providence, vice presidents; Dr. Jesse E. Mowry, Providence, treasurer; Dr. James W. Leech, Providence, secretary. Following the scientific session, the annual dinner was held at the Providence Plantations Club, at which the toastmaster was Dr. Frederic V. Hussey, Providence. The after dinner speakers were Dr. John O. Polak, Brooklyn, who spoke on "The Modern Trend in Medical Education," and Carl Akeley of the American Museum of Natural History, New York, who spoke on his adventures in Africa. The $300 prize offered last year by the Fiske Fund of the Rhode Island Medical Society for the best essay on "The Treatment of Neurosyphilis" was awarded to an essay entitled "To Be or Not to Be," the author of which was Dr. James Lincoln McCartney, Washington, D. C. A similar prize will be offered for 1924-1925, for the best essay on "Recent Progress in Plastic Surgery."

TENNESSEE

Physician Fined on Narcotic Charge.—Dr. Charles G. Griffin, Nashville, indicted on a charge of violating the Harrison Narcotic Law, will pay a fine of $1,250, it is reported, as a result of a compromise made with the United States district attorney. Dr. Griffin and a number of other physicians were arrested on a charge of violating the anti-narcotic act in the spring of 1923.

Personal.—Dr. Herbert Acuff has been elected president of the Knoxville Chamber of Commerce.——Dr. Henry K. Cunningham and Dr. Richard McIlwaine have been reelected medical inspectors of the city schools of Knoxville.——Dr. Marvin F. Haygood, formerly director of municipal and rural sanitation for the state health commission of Georgia, has been appointed full-time health officer of Knoxville.

WYOMING

Judge Refuses Writ to Venereal Suspect.—Judge Rose, Casper, refused to grant a writ of habeas corpus, June 7, for the release of Ollie Kelly, who was held by the city health department in the jail, suspected of having venereal disease. The evidence at the hearing showed that the health officer had reasonable knowledge that Kelly should be examined, that a cursory examination indicated Kelly had venereal disease and that he was being held until the examination could be completed. However the judge ordered that the plaintiff be released when the examination was completed or at most forty-eight hours after it was started.

CANADA

University News.—The Rockefeller Foundation has recently presented the Medical College of the University of Toronto with the sum of $650,000, and that of McGill University, Montreal, Que., with $500,000.—The McGill University Faculty of Medicine celebrates its centenary this year. The medical faculty, founded in the fall of 1824, was the first to be opened at McGill, and was the first medical school established in Canada.

GENERAL

Water Safety Campaign.—The American Red Cross and the Boy Scouts of America will join in an extensive campaign this summer, the object of which will be to teach each of the 600,000 boy scouts to swim. The Red Cross Life-Saving Corps has 45,000 qualified water experts who will be available throughout the country and particularly at summer camps as instructors.

Association of American Teachers of Diseases of Children.—At the annual meeting of this association held in Chicago during the annual session of the American Medical Association, the following officers were elected: president, Dr. Julius H. Hess, professor of diseases of children, University of Illinois College of Medicine, Chicago; secretary, Dr. Paul W. Emerson, Boston, of the department of diseases of children, Medical School of Harvard University, Boston.

Warning.—The Chicago Fresh Air Hospital writes that a young man, passing under the name of William J. Bohannon, applied for admittance recently, destitute and in need of treatment. After a week at the hospital he borrowed $25 by misrepresentation and cashed a check for $52 drawn on the Arizona National Bank of Tucson, which bank refused payment because "C. S. Drake," whose name was signed to the check, had no account at that bank. Bohannon is about 22 years of age with dark hair, brown eyes, 67 inches tall, weight 146 pounds. He has a right-sided artificial pneumothorax, and was formerly treated in Arizona.

Third Pan-American Scientific Congress.—This congress will be inaugurated, November 16, at Lima, Peru, South America, and will last for two weeks. The organization committee consists of Dr. Manuel V. Villarán, rector of the university, president; Dr. Alejandro O. Deustua, dean of the faculty of letters and director of the national library, and Jose J. Bravo, president of the Peru Association for the Advancement of Science, secretary general. The congress will comprise nine sections, the presidents of which have been appointed. The president of the section on medicine and sanitation is Dr. Guillermo Gastañeta, dean of the faculty of medicine. The president of the section of biology and related sciences is Dr. Wenceslao F. Molina, dean of the faculty of sciences.

Committee to Consider Behavior Problems.—A temporary committee consisting of ninety-seven members, among whom are prominent physicians, educators and officials, has been organized to meet in conjunction with the annual meeting of the National Education Association, at the Shoreham Hotel, Washington, D. C., July 3, 1924, to consider what the schools can do to help solve the behavior problems of children. A request will be made of the National Education Association that a committee on behavior problems of children be appointed as one of that association's standing committees, and that such committee be requested to take steps to arrange conferences and a permanent organization. Inquiries prior to the organization meeting, July 3, may be addressed to Graham R. Taylor, 50 East Forty-Second Street, New York City.

Standard Methods of Water Analysis.—The American Public Health Association announces that an agreement has been made with the American Water Works Association whereby the committee on standard methods of the former association and a corresponding committee of the latter will in the future be jointly responsible for the text of future editions of Standard Methods for the Examination of Water and Sewage. These committees may cooperate with other scientific bodies, if they so desire. Each association will share equally in the cost of the production and in the receipts of sale. Copies of the joint edition will be sold by both associations. This book has been published for many years by the American Public Health Association. It has come to be an international standard for water and sewage analyses as well as a textbook in many universities and laboratories.

National Tuberculosis Association.—At the twentieth annual meeting of the National Tuberculosis Association in Atlanta, Ga., the week of May 5, Dr. Charles J. Hatfield, Philadelphia, was elected president; Col. George E. Bushnell, U. S. Army, retired, Pasadena, Calif., honorary vice president; Dr. Walter Jarvis Barlow, Los Angeles, vice president; Dr. Hoyt E. Dearholt, Milwaukee, vice president; Dr. George M. Kober, Washington, D. C., secretary. Drs. William H. Welch, Baltimore, Vincent Y. Bowditch, Boston, and Edward O. Otis, Boston, were elected honorary members of the association by the board of directors. Mr. Einar Holboell of Denmark, who devised and made available the Christmas seal idea for raising funds for the antituberculosis movement, was present, and a resolution was passed expressing the appreciation of the association for his great service.

Roentgen Ray Society Prize.—The American Roentgen Ray Society has offered a prize of $1,000 to the author of the best piece of original research in the field of the roentgen ray, radium or radioactivity. The competition is open to any one living in the United States or its possessions, or elsewhere in the Western Hemisphere, but is not open to any one holding a patent or copyright. Work submitted for the prize carries with it the understanding that the subject matter will remain open to free use for the public good. Papers must be typewritten in English and enclosed in a plain envelop, so that the committee will not know the contestant's name before the prize is awarded, and submitted not later than May 1, 1925. The prize is offered for the promotion of useful research with the approval of the National Research Council, and to commemorate the name of Dr. Charles Lester Leonard, who was a martyr to the roentgen ray. Dr. George W. Grier, 8088 Jenkins Arcade, Pittsburgh, Pa., is chairman of the committee.

Tests on Weakly Radioactive Preparations Discontinued.—Tests on waters, muds, slimes and other weakly radioactive materials have been discontinued by the Bureau of Standards Radium Laboratory of the Department of Commerce, and will be made henceforth only in cases of special importance. Such tests are not considered of sufficient public benefit to justify making them in a government laboratory, while there is thought to be some danger of the results being used in fraudulent or questionable advertising. Some of the materials submitted for test recently have proved to be about as radioactive as the Washington city water supply. The Bureau of Standards ventures no opinion as to how little radioactive material a substance may contain and still possess therapeutic value, as such questions must be settled by the medical profession. With many people, however, the mere statement that a preparation is "radioactive" is sufficient. They do not realize the importance of the amount of radioactivity, nor that most substances possess radioactivity in small amounts. Tests on preparations of sufficient strength to be of unquestioned therapeutic value are being continued as formerly.

Medical Legislation in the Last Congress.—A survey of legislation relating to physicians, public health and kindred matters presented to and considered by the recent session of Congress covers a wide range of subjects. An important bill

was the measure to establish a Department of Public Welfare. This measure has finally been remodeled to meet the approval of all cabinet heads of the government. It was introduced in its present form by Senator Smoot, June 3. The measure was the subject of numerous conferences of the cabinet under President Harding and also under President Coolidge. Those who have sponsored the movement believe that progress is being made in the work of placing under one head the various activities of the government relating to health. Legislation in various forms was considered and passed relating to doctors in the Public Health Service, Veterans' Bureau and Indian Service of the government. Congress has continued its program of summer camps, whereby approximately 30,000 youths of the country are given military training for a period each year. This training, without question, will have its influence on the health and physical upbuilding of not only the young men who attend the camps, but all others who will be favorably influenced by this notable work of the federal government. Schools and colleges will, without doubt, establish similar courses of training and such courses can be established without expense in many colleges, as well as high schools and grade schools. There was also legislation passed which gave a pension status to army nurses, and a bill was favorably reported to the Senate giving army and navy nurses longevity retirement pay on the same basis as regular officers of the army and navy. The Bonus Law awarded to physicians of the Public Health Service who were in the World War the same rights awarded to others who served in the war. These rights were temporarily denied such physicians through the unwarranted objections of a certain member of Congress. The rights were later restored, however, as they properly should have been. The bill codifying the laws relating to the Veterans' Bureau at one period fixed the status of more than 600 physicians commissioned in the Public Health Service and temporarily assigned to the Veterans' Bureau. This text of the bill was eliminated and it required an executive order of President Coolidge to designate these physicians as special experts, thus retaining them in the Veterans' Bureau with a definite status. The Reclassification Law awarded to physicians in the Indian Service much needed increased salaries. These increases average from 50 to 100 per cent. above the existing salaries of such physicians in the Indian Service. Unfortunately, the actual appropriation of money to pay such increases failed on the last day of Congress. The tax reduction bill failed to incorporate the provision reducing the tax on physicians, dentists and others who use narcotics in professional capacity. The rate of $3 per year still remains, although it is shown that the government makes more than $500,000 per year from the medical profession as a result of this tax. The profession had asked that the original tax be restored—$1 per year. Two other minor modifications of the Tax Law in the interest of the medical profession failed to be adopted.

FOREIGN

The Netherlands Model Headquarters for the Public Health Service.—The new building recently inaugurated at Amsterdam for a central bureau for the public health service and social welfare work is in charge of Dr. L. Heijermans. It has been planned with special reference to the statistics service and the fight against tuberculosis. The *Tijdschrift voor Sociale Geneeskunde* has issued a special number with illustrations describing the building and the work of the department.

British Association Establishes Prize for General Practice.—The council of the British Medical Association has decided to establish experimentally an annual prize, to be called The Sir Charles Hastings clinical prize, for an essay or lecture designed to stimulate systematic observation, record and research in general practice. The first prize will be awarded in 1926, and any member of the association engaged in general practice is eligible to compete. The work submitted must include personal observations of the candidate collected in general practice, and a high order of excellence is expected.

Organizing Secretary for South Africa Society.—The British Medical Association has offered to grant £1,000 for three years to the branch society in South Africa to aid in the expense of employing a whole-time organizing secretary. The *South African Medical Record* says, in part, that the most regrettable feature of the medical position in South Africa is not the small proportion of practitioners who belong to the British Medical Association, but the small proportion who belong to any medical association at all. It appears that of about 1,400 practitioners in that country only about 700 belong to the association.

Intelligence and Cranial Capacity.—Prof. R. W. Reid of Aberdeen, Scotland, and Dr. J. H. Mulligan have published the results of a study of the relation between intelligence and cranial capacity on 449 male students of undoubted Scotch extraction. The average head length, head width and head height were determined, and the product of these dimensions was taken as a measure of cranial capacity. As a measure of intelligence, the sum of marks obtained in examinations in anatomy, physiology and pathology were used. Other things were taken into account, but no sensible correlation was found between examination marks and cranial capacity. The authors consider that their study confirms the opinion already expressed by Pearson and Macdonell that anthropometric examination of a person's head is no guide to the intelligence of the owner.

CORRECTION

Society News.—THE JOURNAL (May 10, p. 1557) noted the election of officers of the St. Lawrence County Medical Society, New York. Dr. David E. Hoag, New York, writes that this was an error as the election reported was not that of the medical society, but of the St. Lawrence County Society which is an historical and social organization.

Government Services

Hospitals Authorized

Pursuant to instructions from the Secretary of War, the organization of General Hospital No. 126, organized reserves (St. Luke's Hospital Unit, Kansas City, Mo.), General Hospital No. 80 (Cornell University Medical College Unit, New York), General Hospital No. 7 (Boston City Hospital Unit, Boston), and Veterinary Station Hospital No. 1, organized reserves (Auburn, Ala.), has been authorized.

Public Health Service Physicians to Veterans' Bureau

President Coolidge, June 7, signed an executive order making 657 United States Public Health Service physicians "Special Experts" in the Veterans' Bureau. This action was essential because of the passage of the Reed-Johnson Veterans' Bureau Law, which made no specific provision for Public Health Service physicians now in the Veterans' Bureau. These physicians have for the last two years been employed in the Veterans' Bureau at Washington and in veterans' hospitals throughout the country, and heretofore have been in the Reserve Corps of the U. S. Public Health Service. The order of the President is made under the general terms of the Reed-Johnson law, which places on the "technical and administrative staff of the Veterans' Bureau" such experts and assistants as the director may prescribe. The effect of the order will be to give these physicians a rating through which it is unnecessary for them to comply with Civil Service Commission regulations.

Increased Pay in Indian Service

Physicians in the Indian Service of the government were given much needed increased pay by the report made under the Classification Law of the field service employees of the government. In general terms the average pay of these physicians was increased from 50 to 100 per cent. and was to be effective at the beginning of the fiscal year, July 1, 1924. The necessary appropriation providing for the payment of these increased salaries passed the Senate and House, but the bill did not secure the Speaker's signature in the closing hours and thus failed to become law. It was clearly the intention of Congress to increase the salaries of these physicians, who are notoriously underpaid. While definite prediction cannot be made, it is probable that the increased salaries will be given to these physicians either by executive order or by affirmative decision of the Comptroller General of the Treasury Department. The precedent for such action may be based on the fact that such decision has, within the last few days, been made by Comptroller General McCarl with reference to increased pay for teachers, police officials and other employees of the District of Columbia. There are approximately 186 physicians in the Indian Service whose average pay has been approximately $1,100 per year.

Foreign Letters

LONDON

(From Our Regular Correspondent)

May 26, 1924.

The Welfare of the Blind

In the House of Commons was read a second time a bill proposing that every blind person who has attained the age of 30 shall be entitled to receive such pension as under the Old Age Pensions Act he would be entitled to receive if he were 70 years of age. The present pension age is 50. According to the bill, county councils and county borough councils are to make arrangements to the satisfaction of the ministry of health for promoting the welfare of blind persons ordinarily resident within their area, by providing and maintaining workshops and hostels and homes for them. Those employed in the workshops are to be paid remuneration not less than the average standard rate received by unskilled laborers in the district. The blind must be no longer left solely to the care of institutions, splendid as has been the work they have done in the past. The number of blind persons in England and Wales from 1 year of age upward is 36,578. Those trained and employed amount to 8,239; those under training only to 1,246; and those unemployed, who are between the ages of 30 and 70, number 20,759.

Mr. A. Greenwood, parliamentary secretary to the ministry of health, expressed the desire of the government to maintain the spirit of unanimity already in the house. He stated that for many years the labor party had taken an active interest in the welfare of the blind. The government attached considerable importance to steps for the prevention of blindness. Apart from industrial and other accidents, blindness was in large measure preventable. Every effort should be made to eliminate preventable blindness, and to that question the minister of health was now giving his attention.

Criminal Responsibility

As recent letters have shown, the subject of criminal responsibility has been under discussion for some time, both in medical and in legal circles. Addressing the jury at the Berkshire assizes, Justice Horridge said that recently there had been a controversy as to the criminal responsibility of persons about whom there might be a suggestion of mental deficiency, and a bill on the subject was introduced in the House of Lords but was withdrawn. He agreed with the ruling given by the judges after the McNaghthen case, namely, that the judge must tell the jury that a man was not responsible for a crime if he did not know the nature and quality of the act, or if he did not know that it was wrong. That had been an excellent working rule, because behind the actual trial there was the home secretary, who could always order an inquiry by physicians if exceptional circumstances warranted it, and he was guided by them as to whether the sentence should be carried out or not. The public might be certain with these safeguards that justice would not miscarry. Certain scientific medical persons had lately started a theory that a man should not be held responsible for actions, if actuated by an irresistible impulse. It was quite impossible to put that into working practice. How was a jury to determine whether a man was actuated by an irresistible impulse arising from mental disorder when he snatched an attractive bag from a woman's hand? Irresistible impulse arising from mental disorder was seldom advanced except in murder charges, the reason being, he supposed, that imprisonment in an asylum for the criminal insane was often far more serious than any punishment that might be imposed for a less grave crime than that of murder.

Prevalence of Epidemic Encephalitis

The ministry of health states that the number of cases of epidemic (lethargic) encephalitis notified in England and Wales during the week ending May 17 was 286, to be compared with 291 for the week ending May 10, and 262 for the week ending May 3. Since the beginning of the year the number of notified cases has been 2,473 (as compared with an annual average of 839 in the previous four years). Out of this total, 281 have occurred in London, the chief centers affected elsewhere being Manchester, Sheffield, Birmingham and Bristol. In general, however, the cases have been widely scattered throughout different parts of the country. It is too soon to estimate the mortality, but on the deaths so far reported the mortality has varied in different cities from 12 to 21 per cent. of the notified cases. The present epidemic prevalence is similar to, though more extensive than, that of the corresponding period in 1921, when a total of 1,155 cases was reported. Speaking generally, there are signs of decline in the districts mainly affected, but the spread of infection to new districts results in the maintenance of the total prevalence. As in previous years, there is little evidence that the definitely recognized cases of the disease are responsible for spreading infection, the epidemic being presumably kept up by slight and unrecognized cases, or by healthy carriers of the virus of the malady. No specific measures, such as vaccines, are at present available either for prevention or for treatment. Researches on the nature of the virus, and many other problems arising in connection with encephalitis, are being actively pursued under the direction of the Medical Research Council, and in numerous laboratories at home and abroad.

The following table gives the notifications of and deaths from epidemic encephalitis in England and Wales for each quarter in 1922 and 1923, and for the first twenty weeks of 1924:

1922	Notifications	Deaths
First quarter	140	95
Second quarter	132	96
Third quarter	89	82
Fourth quarter	93	66
1923		
First quarter	448	188
Second quarter	279	167
Third quarter	144	90
Fourth quarter	154	86
1924		
First quarter	753	229
Seven weeks ended May 17	1,715	...

In Birmingham, the number of victims of epidemic encephalitis continues to increase, and fifteen further cases were notified last week, one of them proving fatal. The health officer has circularized the medical profession, calling attention to the different types of the disease most prevalent, and mentioning that since the commencement of the present year about 150 cases have been reported in the city. They are occurring in various parts of the city, and almost without exception there is no connection between any two cases. In Sheffield, last week, the number of new cases was seventeen. There were five deaths from this cause in the city. This brings the total number of cases in Sheffield since March 10 to 234, with thirty-one deaths. The average for the last seven weeks has been twenty-six new cases and three deaths. The Glasgow health department reported eighty-five cases in the city since early last month. Three deaths have occurred so far. The disease is much milder in type than that of the visitation of a year ago, but is more widespread over the city area. The opinion is officially expressed that the malady is now on the wane; but, as recovery is slow, the large majority of patients are still under treatment or observation in city hospitals.

PARIS

(From Our Regular Correspondent)

May 23, 1924.

Ceremonies in Honor of the Tercentenary of Sydenham

The Academy of Medicine devoted its last session to the commemoration of the tercentenary of the birth of Sydenham. Dr. Doléris, president of the academy, opened the ceremonies and delivered the address of welcome to the official British delegates to the celebration: Dr. Sidney Phillips, treasurer of the Royal College of Physicians of London; Dr. Ryle, member of the Royal Society of Medicine, and Dr. Russell, former secretary of the Sydenham Society. Professor Chauffard then read a fine eulogy of Sydenham, whom he described as an eminent observer, attaching little importance possibly to the teachings of his predecessors, preferring to rely on what he learned from his own practice and trusting only what he saw with his own eyes. The masterwork that every physician thinks of when the name of Sydenham is mentioned, Chauffard recalled, is his famous treatise on gout. His description of this disease is such a classic that Laségue aspired to produce a translation of it. His account has taken such a hold on our minds that when we observe our patients suffering from gout we seem to be looking through the eyes of this old master. Trousseau refers to this treatise, De podagra et hydrope, as a "marvelous monograph—at once so short and yet so complete." "If you translate," says Trousseau, "into modern scientific language this work of the English Hippocrates, you will be surprised, as you read and admire the description that this great man has given us of gout, how little is left to be added." In the field of clinical observation, his words still ring true. From reading these few pages, we get the impression that he has seen everything and told everything, and that in the most precise and definite language.

Sydenham was a noble, upright character, who lived a very simple, quiet life, full of disinterested devotion to his work. He was not a seeker after honors or public office; nor did he care to take on professorial duties or to give oral instruction. He was in charge of no hospital service, and his sole ambition seems to have been to examine his patients thoroughly, to care for them in the best manner possible and to make known to the medical profession the results of his observations. He was truly and above everything else a great practitioner. In closing his address, Chauffard referred to the fact that in 1840 the Royal College of Physicians of London caused the monument erected to Sydenham in Saint James Church, Piccadilly, to be restored, at which time these words were added to the epitaph: *Medicus in omne aevum nobilis* (a physician whose nobility of character persists down through the ages). This is the judgment of posterity.

Drs. Phillips and Ryle, two of the British delegates, delivered short speeches in which they thanked the academy for the homage paid to their fellow-countryman. The ceremonies closed with a few words by Professor Achard, general secretary of the academy, in which he emphasized the duty of academies to revive from time to time the memory of our great predecessors, for we should be at all times ready to acknowledge ourselves their grateful heirs, no matter how great may be the newer riches that have come to us.

The Danval Affair

Our supreme court (the court of cassation) has recently annulled the decision by which, forty-six years ago, the court of assizes of the department of the Seine had pronounced a life sentence at hard labor against the pharmacist Danval, charged with having committed the crime of poisoning his wife with arsenic. After performing a chemical analysis of the organs taken from the body of Mme. Danval, the experts had stated that they had found an appreciable amount of arsenic in them. At that time, it was held that arsenic does not exist normally in the organism. The expert witnesses felt, therefore, compelled to attribute the death of Mme. Danval to poisoning by arsenic. There was, it is true, a counter opinion, rendered by Bouis, professor of toxicology at the Ecole de pharmacie of Paris, who admitted the presence of an exceedingly slight amount of arsenic in the liver and the intestine but could not discover a trace of the mineral in the stomach. He supported the view that the infinitesimal amount of arsenic found in the organs might be due to accidental causes and concluded that the wife of Danval had not died as the result of poisoning by arsenic. Still other experts were heard, who gave contradictory reports. In the necropsy report, the expert witnesses had concluded that there was an "absence of any determinable cause of natural death," although Cornil, professor of pathologic anatomy, who represented the defendant, pointed out that the necropsy had been incomplete on several counts, especially as regards the examination of the pancreas, the liver and the kidneys. He maintained that there might have been found in the kidneys evidence of interstitial nephritis, which might have produced symptoms of uremia such as had been observed in Mme. Danval. Cornil concluded therefore that there was no just ground for affirming that Mme. Danval had not died from natural causes, and that there was no sound basis for the belief that she had been poisoned by arsenic.

It would seem that such contradictory opinions should have awakened doubts in the minds of the jury. Such was not the case, however, and Danval received a life sentence at hard labor. In 1899, Prof. Armand Gautier demonstrated the presence of arsenic in the normal state in the organism. Danval, as the result of this discovery, obtained a pardon in 1902, and in 1904 he entered a demand for a revision of the original decree condemning him to life imprisonment. The court of cassation rejected his first demand, basing its decision on the consideration that the arsenic found in the cadaver could not be attributed to the normal supply of this mineral in the organism, for the quantity found in the cadaver was much greater than the infinitesimal amounts found by Gautier in the healthy body. But, in 1921, the results of new investigations were communicated to the Academy of Sciences by Kohn-Abrest, Sicard and Paraf, which went to show that the quantity of arsenic existing in the normal state in the organism ranged from 1 to 3 mg., whereas the quantity of approximately 2 mg. found in the cadaver of Mme. Danval had been interpreted as constituting evidence of arsenical intoxication. It was pointed out also that the symptoms of renal insufficiency recently described resemble those of poisoning and are not unlike the symptoms that Mme. Danval presented shortly before her death. Danval filed accordingly a second request for a revision of his case, which was granted, with the result that the original decree of life imprisonment was annulled. The court of cassation ruled that the state should pay Danval 20,000 francs in one lump sum, and, in addition, grant him a life annuity of 12,000 francs.

When Danval was sentenced in 1878, he was 33 years old. When pardoned in 1902 he had been twenty-four years in prison. He is now 79 years of age.

Lectures Delivered by American Physicians

During recent weeks, several medical lectures have been delivered in Paris by Americans. Dr. Young of the Johns Hopkins Hospital, Baltimore, gave an address in French at the Faculty of Medicine of Paris, on the treatment of general and local affections by intravenous injections of mercurochrome-220 soluble and gentian violet. Dr. Beer of the Mount Sinai Hospital, New York, delivered a lecture (also in French) on the diagnosis of renal and bladder affections in children.

VIENNA

(From Our Regular Correspondent)

May 8, 1924.

Diseases of Speech and Their Treatment

In the regular postgraduate classes for practitioners instituted by the Vienna Medical College and accessible to all medical men, Drs. Stern and Pöschels discussed stammering and other affections of speech. The most frequent affection is called dyslalia, in which a letter cannot be pronounced at all, or is pronounced with difficulty, or is replaced by another. Balbuties, or true stammering, is a complex of mostly nervous disturbances of articulate speech. Aphonia spastica, as well as aphasia, is not very frequent. Mutism is much more frequently encountered, either as deaf-mutism or as idiopathic (or auditory) mutism. While the deaf-mute cannot learn, of his own will, to speak, the other group hears, but cannot make use of its hearing to speak (motor or sensory mutism). In the motor cases the patients can be taught to speak by muscular exercises, and by respiratory and optic exercises. The sensory group is much less amenable to treatment than the first group, which gives 100 per cent. cures, if properly looked after. Pöschels has found that stammering is mostly due to difference of development between the ability to speak and the will to speak in children. Sometimes the will is quick, but the stock of words is not sufficient to express the thoughts; in other instances, the child wishes to speak, but does not know what to say or how to speak. In both cases it will repeat the last syllable until the correlation is again restored, or the new word or syllable is found. Such "infantile" stammering is frequent, and disappears soon without trace. If, however, this condition persists for a long period and true (tonic) stammering is added, then the condition requires treatment, by removing the "fear of speaking" by improving physical development, by refraining from calling the attention of the stammerer to his defect, by regular exercises of speaking and reciting, or, in severe cases, in handing the patient over to the speech specialist. It is always necessary, of course, to find out whether the mental condition of the child is normal and how the acoustic nerve functions.

Retrobulbar Neuritis and Accessory Sinus Disease

Retrobulbar neuritis and accessory sinus disease were discussed at a recent meeting of the Vienna Ophthalmologic Society. Drs. Beck and Pillat gave the results of their investigations in sixty-four cases of nasal obstruction, fifty-three cases of empyema and twenty-five cases of ozena, with a view to ascertaining the ophthalmic condition of these patients. In none of the patients could any trace of retrobulbar neuritis be found clinically. But the histologic findings in four cases of neuritis in which the nasal mucosa was examined showed signs of edema and infiltration with round cells and eosinophils; in other words, a serous catarrhal inflammation was present, but no osseous changes were found. Dr. Beck concludes that, while actual disease conditions of the nose are not associated with retrobulbar neuritis, the latter is present in cases with a mild inflammation of the mucosa of the accessory sinuses. In all the cases with severe changes of the nasal mucosa, a normal fundus and a normal visual field were found, just as in cases with normal nasal conditions. Professor Meller, an ophthalmologist, and Professor Neuman, a rhinologist, emphasized the fact that rhinologists must now admit that it is important to open up the accessory sinuses in such cases, even if no gross change is found, if the ophthalmologist requires them to do so, for the frequency of improvement after operation and the poor results of conservatism prove that the ocular condition is influenced by the operation, especially when slight or no changes are found in the mucosa. Dr. Hirsch, a rhinologist, and Drs. Kofler and Kramer and Professor Dimmes, ophthalmologists, pointed out that not only should rhinologists be widely informed of the results of these investigations, but also general practitioners should be instructed that an early opening of the nasal sinuses is important in all these cases, to avoid a loss of vision. Purulent inflammations of the sinuses mostly lead to intra-ocular complications, such as phlegmonous inflammations or panophthalmia, but serous catarrhal inflammations, without manifest signs in the nasal mucosa, may cause retrobulbar neuritis.

Professor Hochenegg's Attack on the Profession: Verdict of the Disciplinary Court

As mentioned previously, Professor Hochenegg published a pamphlet embodying in a more concise form the statements made by him before an audience of medical students two or three months ago. In the lecture and the booklet, he charged the bulk of the medical profession with dichotomy and errors in arriving at an indication for surgical intervention. The storm of indignation that broke both in the profession and among the public was not allayed when he refused to substantiate his charges by giving precise figures or names. The medical council instituted an investigation of the actual conditions, and published its material pertaining to these charges. It is well known and accepted by the state institutions that the house physicians or other medical men who are assistants or anesthetists at operations get a fee of from 20 to 25 per cent. of the surgeon's fee; but that is not a "commission," as contended by Hochenegg. It is a regular payment for actual services rendered to the patient, and its payment has never been kept hidden from the patient. All specialists admit that this state of affairs exists and no patient ever refuses to pay the assistant's fee. Even sickness insurance clubs pay 20 per cent. of the operation fee to the assistants and the same amount to the anesthetist. In accusing the profession of dichotomy, the professor has exaggerated recognized facts. As regards his other charge—want of judgment in indications for operations—he could not show a single instance to support this charge. The disciplinary court of the medical council came to the conclusion that the professor grossly neglected the duty of substantiating his accusations, and that he acted absolutely unethically in falsely accusing the whole profession of dishonesty. He was fined half a million kronen and deprived of the active and passive right of election on the representative bodies of the profession. The council cannot impose any severer judgment. But the fact that he has been condemned by the disciplinary court and declared to have behaved contrary to medical ethics will be reported officially to the board of the Vienna University, and will result in depriving him of the *venia legendi* (the right to give university instruction); in other words, he will have to give up the clinic. Medical circles regret that the council has no direct means of dealing with such an offender, and that the real punishment must be left to other institutions.

Meeting of the Austrian Antituberculosis Society

The sixth meeting of the Austrian Antituberculosis Society, which was held recently in Vienna, united a large number of persons engaged in fighting tuberculosis. Apart from technical papers devoted to the management and control of welfare centers, a number of medical papers were presented. Professor Weichardt of Erlangen discussed the theory of treatment by protein bodies. The organism itself that has been attacked plays the principal part in its defense. The modern view, therefore, is to attempt to activate the cells of the body, so that their defense may be more effective. By injecting proteins, a nonspecific therapy against all wasting diseases is aimed at, and excellent results have been obtained in tuberculosis. Milk injections have been shown to be a

most potent means of increasing the resistance of the organism against infection; their "omnicellular" action is distinctly opposed to the specific immunity produced by toxins and antitoxins. A paper on modern methods of treatment of tuberculosis was presented by Professor Lorgo. He showed why nontuberculin injections are scientific, that injections with blood serum are very promising, and that protein injections are the "latest cry." Heliotherapy, he said, must be used with caution, but in selected cases of laryngeal, skin or bone tuberculosis it may be most beneficial. Psychotherapy is essential in all cases of long standing; and climate and diet are among the most important factors. Hygienic dietetic treatment must never be omitted, even in the lightest cases, for this is the only safe means to build up a body that will produce the necessary resistance. Professor Pfaundler of Munich spoke about errors in diagnosis in tuberculosis of children, and Weinberger of Vienna spoke on the same subject in adults. Both agreed that the Pirquet test is a most reliable means of clearing up a diagnosis. Professor Durig of Vienna pointed out that at present the mortality from tuberculosis is diminishing, especially in Austria, owing partly to the rapid increase in institutional care of the tuberculous; partly to the fact that all the more severely affected persons died during the years 1917 to 1920, when underfeeding was at its height, and partly to improvement in treatment. Dr. Götzl stated that of 3,761 men school teachers in Vienna, 1.6 per cent. had to be placed on the tuberculosis permanent sick list, and of 3,985 women, 3 per cent. Vienna is foremost among all cities in eliminating this source of infection in children; by special provision, a tuberculous teacher is invalided at once with a pension ample to keep him away from work as long as necessary. Among the Vienna school children, there were 419 out of 131,000 who had tuberculosis of the joints or bones (0.4 per cent.). Exact figures pertaining to pulmonary tuberculosis are not available. One of the most important factors in diminishing tuberculosis would be to prevent tuberculous parents, especially mothers, from having children. The Austrian law is very strict on the artificial interruption of pregnancy just now, and an animated discussion is going on in parliament on this subject. Statistics from England and Germany show that for each thousand adult men of the middle classes, there are 100 children; of skilled workmen, 250; of unskilled laborers, 450 children. This shows where the chief danger in the spread of tuberculosis lies. The meeting lasted three days, and was followed by a meeting of the child welfare societies.

BERLIN

(From Our Regular Correspondent)

May 14, 1924.

The German Congress of Internal Medicine

For political reasons, the German congress of internal medicine was not held in Wiesbaden but in the health resort of Kissingen. Great interest was manifested in the congress, and the attendance exceeded 800. I will confine my report to a discussion of the three main topics.

IONTHERAPY AND MINERAL METABOLISM

The papers and topics on the first day's program dealt mainly with iontherapy and mineral metabolism in the body. Professor Wiechowski of Prague discussed the theoretical bases of the problem, emphasizing that the ash analysis does not reveal the condition of the inorganic components of the original material before incineration took place. But it is precisely this knowledge that we must secure in order to separate the organic from the mineral components in the organism, foodstuffs and the eliminations. Such a separation is not possible unless one differentiates organic groups from inorganic compounds and not merely organic substances from inorganic substances. Organic compounds are those in which carbon atoms are combined with one another or directly with a carbon atom. Inorganic compounds are those in which the union is brought about otherwise; for example, through an oxygen atom. Under this conception, certain ester and ether compounds, and likewise phosphorus in the phosphatids, are bound inorganically; whereas the nitrogen in nitro compounds, the iron in hemoglobin, and the magnesium in chlorophyl, are bound organically.

Inorganic compounds, especially those brought about through oxygen (O_2) atoms, are easily dissociated in watery solution into ions, whereas ions are not produced easily from organic compounds. For the most part, the organs and the food are changed in the same manner through vital oxidation. Only a small part is eliminated as an unoxidized organic compound; for example, beta-oxybutyric acid and acetoacetic acid in the diabetic patient. Noncombustible organic cations need hardly be considered in mineral metabolism. As two important groups of compounds found in the organs, the eliminations and the food as the result of vital oxidation may be mentioned, in addition to water and nitrogen (or ammonia): (1) the anions: chlorid, hydrogen-carbonate, sulphate, phosphate, iodid and silicate ions, and (2) the cations: sodium, potassium (ammonium), magnesium, calcium, iron, aluminum and zinc. It is advisable to express the results of the analyses in milligram valence and record them in tables. This will show what changes in the mineral coefficient the body undergoes through a certain food. For example, there is found to be a great similarity between the cations of milk and vegetables. It is found, furthermore, that, in the body, the blood serum and the lymph, the sodium ion and the calcium ion prevail, whereas in the cells and in the solid tissues the potassium ion and the magnesium ion preponderate. Possibly all tissue fluids, such as the cerebrospinal fluid and the aqueous humor, are normally albumin-free salt solutions in which the body cells are contained. Also in the case of the anions, chlorid prevails in the fluid components; and, in the cellular tissues, the phosphate ion is preponderant; for example, muscle freed of blood contains no chlorid. The inorganic components of the cell itself contain thus potassium, magnesium and phosphate ions; the fluids, on the other hand, contain sodium and chlorid ions. Also in foodstuffs all these ions are found in inorganic union, so that through the process of digestion they are freed and become absorbable. Likewise, in the eliminations, all the ions are bound inorganically; of the anions in the bowel evacuations, the phosphate ion predominates—in the urine, the chlorid ion is preponderant. Changes in diet, as experiments on rabbits have shown, may completely alter the behavior of the organism. Thus, animals on a green fodder diet have a lower temperature, a short coagulation time for the blood, are hard to anesthetize with magnesium salts, and are very resistant to inflammatory irritants. The changes in the mineral coefficient are evidenced also by the physiologic and pathologic behavior of experimental animals. It is important to note not only the quantity of the minerals but also their degree of ionization, their relations to the albumin; also the equilibrium of the ions. In pathologic cases, the importance of diet and the use of mineral waters has been shown, since, through exogenous introduction of minerals, mineralization, demineralization or transmineralization appears feasible.

Prof. H. Straub of Greifswald discussed chiefly the relation and influence of the salts on the condition of the colloids in the body. These investigations throw light on the chief mechanisms of the organism. Whereas formerly osmotic pressure was the thing chiefly studied, we are now familiar with the action of ions on the charging of the colloids and the resulting manifestations of imbibition, solvent action,

flocculation or permeability changes in the cell borders. Water has a unique position among the solvents, since it easily dissociates the salts into their ions and produces strongly active ions. Research thus far has been applied mainly to isolated cells or organs, since the body as a whole is not easily accessible for this form of research. We have already learned the great importance of the basic and acid ions for the living organism. Especially interesting is the significance of the salts in the relations of hemoglobin to oxygen. For the clinical estimation of mineral metabolism, the balance experiment is the usual method employed. Through this method, the mode of elimination of the minerals of the body was determined; also the minimum intake required, the maximum amount eliminated and the constitution of the reserve. We have learned also the significance of phosphoric acid and calcium for the regulation of the acid-base equilibrim of the body. In recent years, through ash analyses of the tissues and the blood, the intermediary metabolism has been studied. A constancy of osmotic pressure, in the volume of salt components and in the acid-base equilibrium of the body fluids, has been noted even in the lower orders of animals. The determination of the freezing point indicates the total amount of the dissolved particles, so that the balance shows whether unknown acid or basic components failed to be discovered in the analysis. The equilibrium of the nonvolatile acids and bases is preserved by the kidneys through the elimination of more acid or more basic urine. The blood itself is well protected against marked disturbances by the buffer qualities of the hemoglobin. The carbonic acid that is developed in the course of metabolism regulates through the breathing the nice adjustment of the acid-base equilibrium, under the influence of the respiratory center. Disturbances of respiration through local affections in this region may lead to pathologic changes in the blood reaction. In gastric digestion, the withdrawal of hydrochloric acid from the blood leads to the retention of carbonic acid in the blood and to the formation of alkaline urine. The composition of the food of herbivorous animals makes it more difficult to preserve the mineral coefficient of the blood than it is for the carnivorous and the omnivorous animals (man). Sleep and emotional excitement influence the mineral coefficient; also the seasons, heavy muscular labor and pathologic conditions (acidosis in patients with diabetes), through their effect on the respiratory center, also affect it. On ingestion of certain neutral salts, the acid coefficient of the body is increased. For instance, if calcium chlorid is administered, the hydrochloric acid content is increased, the calcium being eliminated through the intestine. The most serious disturbances are brought about through disease affecting the regulatory organs, especially the kidneys. The fluctuation of the acid components of the blood as dependent on the food is referred to as poikilopikria; the variations in the ion coefficient are spoken of as poikiloionia. Uremic dyspnea and the acidosis of kidney patients—occurring also in pneumonia—are examples of such blood changes. Also closure of the pylorus and changes in the upper reaches of the intestine bring about modifications in sodium chlorid action, through which tetany may result. Also the nervous system and the endocrine glands play a part in determining the character of mineral metabolism.

Professor Freudenberg of Marburg dealt more particularly with the results of recent researches on calcium metabolism, especially in pathologic cases of tetany and rickets. The Rona formula for the dissociation of calcium, in carbonic acid and bicarbonate-containing solutions, should be supplemented, when applied to blood calcium, by a consideration of the phosphates. An extended formula can be worked out by using the ion coefficients as determined by Behrendt. But even an extended formula would not have any practical value, since in the presence of nitrogenous substances of the amido group only slightly ionized complex compounds of calcium result. The existing theories in regard to calcification, which are based on changes in solubility, are not sufficiently well founded. The albumin colloids of calcifying tissues are, as the type experiments of Freudenberg and György have shown, of great importance in the calcification process. In rickets, the first phase is marked by a disturbance in the calcification process, the second by a dearth of phosphate, and the third by rachitic acidosis. The reasons heretofore assigned for the development of alkalosis in infantile tetany have been supported by further discoveries. There is, in a frankly manifest condition, an acapnia which is due to hyperexcitability of the respiratory center. The calcium ions are appreciably diminished in the blood dialysate.

INSULIN THERAPY

The principal theme under discussion on the second day was insulin therapy in diabetes, on which Professor Minkowski of Breslau, chairman of the German committee on insulin, gave an exhaustive report. German clinical investigators have confirmed entirely the statements of the Canadian scientists Banting and Best. Insulin supplies the diabetic patient with a substance that he lacks. It stimulates also certain definite life-giving functions, whereby the patient's general condition is improved, while body weight increases through the taking on of fat and proteins. This is especially noticeable in grave cases. Insulin is indicated also when surgical intervention becomes necessary; when the patient is threatened with neuralgia, stubborn affections of the skin or pulmonary tuberculosis—or, more particularly, with diabetic coma. The overloading of the organism with sugar and the defective utilization of carbohydrates are remedied through the modification that the system undergoes, and normal conditions are restored. Whether insulin exerts merely a palliative effect or is a therapeutic remedy having a lasting influence has been found hard to decide, for the reason that it is usually the grave, formerly incurable cases in which insulin is employed. The danger of the so-called hypoglycemic reaction has been overestimated. The treatment must be adapted to the individual, and caution must be exercised, especially in the choice of an active and pure brand of insulin. The selection of the proper diet for the patient is also very important. Besides the American, English and Dutch preparations, there are now good German and Austrian brands on the market. The substitutes for insulin, however, cannot be relied on as yet. The remedy is best administered subcutaneously. Other methods of administration are not so certain. The action of insulin is based on the furtherance of the ultilization of sugar and not on the checking of the oxidation of sugar in the liver. Many theories have been advanced to interpret the action of insulin, but the problem has not become clarified as yet. Insulin exerts an influence also on the metabolic functions that take place outside the liver. It is possible that several associated cell functions are influenced by it. It is possible also that it contains several substances that have not yet been isolated chemically. Thirty years ago, Minkowski and von Mering induced experimentally in animals, through removal of the pancreas, a pancreatic diabetes, which was brought to a standstill on reimplantation of the pancreas. They did not, however, succeed in producing the chemically active substance of the pancreas, free from subsidiary actions. The attainment of this goal was left for the undeniably meritorious efforts of the Toronto scientists.

NERVOUS AFFECTIONS OF THE STOMACH

The more important papers of the third day concerned the nervous affections of the stomach. Professor Magnus of Utrecht dealt with the experimental bases of the subject. He

described briefly the physiology of gastric motility, the development of the so-called hour-glass stomach, gastric secretions, the pyloric reflexes, the backward flow of intestinal contents into the stomach, and gastric contraction due to hunger. He then discussed the experimental production of secretory and motor disturbances, and called attention especially to the interdependence of the two groups. Hyperacidity is almost never based on a primary increase in the hydrochloric acid concentration of the gastric juice, but may be due to food retention, continuous flow of gastric secretion, disturbances in pepsin digestion, or changes in the stimulability of the gastric glands. He took up also the relationship between gastric ulcer and hyperacidity. Hyperacidity may be elicited also reflexly from the intestine through absence of the pancreatic juice. Disturbances of motility are the result of either abnormal gastric movements or abnormal activity of the pylorus. Also these points were considered: acute motor insufficiency following chloroform anesthesia and abdominal operations, acute pyloric spasm after operations and irritation of the intestine, the dependence of disturbances in motility on direct injury to the stomach wall, on peripheral reflexes and on conditions affecting the intestinal nerves; for example, in peritonitis. He discussed also the conditions leading up to chronic food retention and the causes and results of accelerated evacuation of gastric contents. The vagus and the splanchnic nerves may sometimes be incriminated for disturbances in gastric motility, depending on the state of excitability of their centers. Magnus described in detail the influence of each nerve and the behavior of the stomach under their combined influence, as shown by experiments in which the one nerve was excluded and the other stimulated. By animal experimentation, it is possible through simple interventions to produce various pathologic conditions and to study thoroughly the secondary results of primary disturbances. However, through the clinical observation of patients it is impossible, owing to the multiplicity of simultaneous symptoms, to discover the primary cause.

Professor von Bergmann of Frankfort-on-the-Main holds that the purely clinical method of observation is still to be regarded as the most important in studying this subject. Attention was called to the fact that, owing to the advances made in the diagnosis of gastric conditions, a diagnosis of "nervous affection of the stomach" is reached much less frequently than formerly, and that, with the present multiplicity of gastric symptoms, superficial erroneous diagnoses are usually avoided. All these symptoms may be of organic origin or may be traceable to remote reflexes. Aside from the improved roentgen-ray diagnosis, progress in the diagnosis of gastric affections has been made through gastric analysis by fractional withdrawal of the stomach contents. But even with these improved methods of diagnosis it is not always possible to differentiate between gastric neuroses and other conditions. Contrary to the view taken by Leube, he thinks the "nervous stomach" is only one symptom associated with a general nervous condition. For this reason, treatment should include, along with dietetic and hydriatic methods, which have mainly a suggestive effect, also psychanalysis and psychotherapy, although, in their application, exaggeration and lack of discrimination must be avoided. Also the discovery of psychic connections with secretory processes through the mediation of the nerves of the vegetative system and the connection with the electrolytes of the blood and the cells play an important part in this field of investigation. However, endosecretory disturbances and disharmonious conditions affecting the vegetative system may be operative to the exclusion of psychic influences. In addition to definite pathologic conditions as affecting the central nervous system, ulcers of the small intestine and affections of the gallbladder must be suspected in gastric neuroses.

Marriages

EUGENE JOHNSON STATES, Rochester, N. Y., to Miss Alida Gennifrede Dunham of Batavia, June 3.

WILLIAM A. MICHAEL, Peoria, Ill., to Miss Garnett Groff of Lawrenceville, at Springfield, June 10.

VICTOR R. DACKEN to Miss Joan Deck, both of Casper, Wyo., May 24, at Los Angeles.

JOSEPH H. SHORTELL, Boston, to Miss Louise L. Doherty of Newton, Mass., recently.

DON B. STEWART, Zeigler, Ill., to Miss Alice Carita Alden of Jonesboro, May 15.

JOSEPH E. GATELY to Miss Catherine Neville Stack, both of Baltimore, June 4.

JAMES M. CHRISTIE, Champaign, Ill., to Miss Lucille Burke of Lincoln, May 28.

CHARLES H. POPE to Miss Iva P. Van Pelt, both of St. Louis, May 24.

HERBERT COULSON to Miss Mary Bateman, both of Boston, April 30.

Deaths

William Weise Richardson ✠ Los Angeles; Northwestern University Medical School, Chicago, 1890; past president of the Los Angeles County Medical Society; member of the Western Surgical Association and the Los Angeles Clinical and Pathological Society; professor of clinical surgery at the College of Medical Evangelists, Los Angeles; served in France, during the World War; on the staffs of the Methodist, California Lutheran, Clara Barton and Children's hospitals, and the Barlow Sanatorium; aged 54; died, June 2.

Archelaus G. Field, Des Moines, Iowa; Starling Medical College, Columbus, Ohio, 1854; Medical Department of Columbia College, New York, 1864; member and at one time president of the Iowa State Medical Society; formerly professor of physiology and pathology at the College of Physicians and Surgeons, Keokuk; at one time city physician, county physician, and mayor of North Des Moines; aged 94; died, May 31.

Macy Brooks, Philadelphia; University of Pennsylvania School of Medicine, Philadelphia, 1901; member of the Philadelphia Academy of Surgery and the American Urological Association; served in the M. C., U. S. Army, in France, during the World War; aged 51; was killed, June 5, at Alexandria, Egypt, in an automobile accident.

Floyd Caldwell Shugart, High Point, N. C.; Columbia University College of Physicians and Surgeons, New York, 1915; member of the Medical Society of the State of North Carolina; served in the M. C., U. S. Army, during the World War; aged 33; died, May 30, of pneumonia.

Martin Clement Barrett ✠ Erie, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1913; served in the M. C., U. S. Army, during the World War; on the staffs of the Hamot and St. Vincent's hospitals; aged 35; died, May 24, following a long illness.

Edward Fitzgerald ✠ Bridgeport, Conn.; College of Physicians and Surgeons, Baltimore, 1884; city medical examiner; formerly member of the board of health; on the staffs of the Bridgeport and St. Vincent's hospitals; aged 63; died, May 4, following a long illness.

William Blakemore Hughes, Little Rock, Ark.; Chicago (Ill.) Homeopathic Medical College, 1889; University of Arkansas Medical Department, Little Rock, 1889; member of the Arkansas Medical Society; aged 64; died, May 29.

Thomas Cromwell Stunkard, Terre Haute, Ind.; Medical College of Ohio, Cincinnati, 1885; member of the Indiana State Medical Association; veteran of the Spanish-American and World wars; aged 62; died, June 2.

John B. Harvey, Robertsdale, Ala.; Hahnemann Medical College and Hospital, Chicago, 1887; formerly a practitioner in Chicago; aged 67; died suddenly, May 25, of heart disease.

C. L. Hackworth, South Pittsburg, Tenn.; Chattanooga (Tenn.) Medical College, 1901; member of the Tennessee State Medical Association; aged 54; died, May 23, at a sanatorium in Chattanooga.

George H. Oliver, Peekskill, N. Y.; Laval University Medical Faculty, Montreal, Que., Canada, 1881; for twenty-eight years coroner of Franklin County; aged 69; died, June 5, following a long illness.

Harry Marion Rambo ✠ Zanesville, Ohio; University of Tennessee College of Medicine, Memphis, 1917; served during the World War; aged 31; died, May 14, in a sanatorium in Denver, of tuberculosis.

Joseph K. Cissell, Loretto, Ky.; Louisville Medical College, 1890; member of the Kentucky State Medical Association; past president of the Marion County Medical Society; aged 62; died, June 4.

Nell Elizabeth Ford Stone, Palo Alto, Calif.; Tulane University of Louisiana School of Medicine, New Orleans, 1919; aged 36; died, April 22, at the Children's Hospital, San Francisco, of eclampsia.

Joseph E. Powley, Altoona, Pa.; College of Physicians and Surgeons, Baltimore, 1892; member of the board of health; on the staff of the Mercy Hospital; aged 58; died, June 3, of heart disease.

Samuel Dinwiddie Weir, Terre Haute, Ind.; Bellevue Hospital Medical College, New York, 1876; formerly on the staff of St. Anthony's Hospital; aged 72; died, May 22, at St. Petersburg, Fla.

Walter Davis ✠ Wilkes Barre, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1897; on the staff of the City Hospital; aged 52; died, June 2, of chronic nephritis.

Joseph Vincent Dooling, St. Johns, Mich.; Detroit College of Medicine and Surgery, 1899; member of the Michigan State Medical Society; aged 51; died, May 24, of heart disease.

Robert Condit Eddy ✠ New Rochelle, N. Y.; Medical Department of the University of the City of New York, 1884; on the staff of the New Rochelle Hospital; aged 66; died, June 1.

J. Frank McGuire, Alpena, Mich.; New York Homeopathic Medical College, New York, 1884; member of the Michigan State Medical Society; aged 66; died, May 17, of gastric ulcer.

Edsil W. Bachman ✠ Estherville, Iowa; State University of Iowa College of Medicine, Iowa City, 1887; aged 70; died suddenly, in May, at Rochester, Minn., of heart disease.

James B. Murphy, Stillwater, Okla.; University of Louisville (Ky.) Medical Department, 1881; member of the Oklahoma State Medical Association; aged 68; died, May 19.

James Dowling Traak, Highlands, N. J.; Medical Department of the University of the City of New York, 1877; member of the board of education; aged 72; died, May 19.

Osborn M. Wiseman, Zanesville, Ohio; Starling Medical College, Columbus, 1890; member of the Ohio State Medical Association; aged 64; died, May 29, of heart disease.

John Alexander Nelson ✠ Tribune, Kan.; John A. Creighton Medical College, Omaha, 1906; aged 45; died, May 4, at the Missouri Pacific Railway Hospital, St. Louis.

W. Arlett Parvis, Socorro, N. M.; University of Maryland School of Medicine, Baltimore, 1905; member of the New Mexico Medical Society; aged 41; died, May 27.

L. Lafayette Bond, Denison, Iowa; Rush Medical College, Chicago, 1870; member of the Iowa State Medical Society; Civil War veteran; died, May 28, of carcinoma.

Jacob Riley Etter, Crawfordsville, Ind.; Indiana Medical College, Indianapolis, 1876; member of the Indiana State Medical Association; aged 72; died, May 22.

Raymond Lafevre Hatfield ✠ Danville, Ill.; Chicago Homeopathic Medical College, 1903; aged 45; died, May 29, in a local hospital, of a self-inflicted wound.

Robert Llewellyn Powell, Belmont, Va.; George Washington University Medical School, Washington, D. C., 1909; aged 38; was shot and killed, May 17.

William H. Shipps, Bordentown, N. J.; University of Pennsylvania School of Medicine, Philadelphia, 1878; aged 74; died, June 1, following a long illness.

Oscar George Frink, South Shore, S. D.; Rush Medical College, Chicago, 1891; member of the South Dakota Medical Association; aged 62; died, May 31.

Perry Green Walker, Owensboro, Ky.; Howard University School of Medicine, Washington, D. C., 1891; aged 58; died suddenly, May 26, of heart disease.

George Franklin Thomas ✠ Cleveland; Western Reserve University School of Medicine, Cleveland, 1906; aged 42; died, May 29, of heart disease.

James Luther Gandy, Humboldt, Neb.; Rush Medical College, Chicago, 1867; Civil War veteran; aged 79; died, May 21, following a long illness.

William Henry Ludewig, Foley, Ala.; State University of Iowa College of Medicine, Iowa City, 1890; aged 71; died, May 18, of angina pectoris.

William Edward Ashman, Dayton, Ohio; Ohio State University College of Medicine, Columbus, 1910; aged 39; died, June 3, of heart disease.

Harry Paul Greene ✠ Brattleboro, Vt.; University of Vermont College of Medicine, Burlington, 1908; aged 40; died, June 1, of tuberculosis.

Charles Dilworth King, Gillespie, Ill.; St. Louis (Mo.) University School of Medicine, 1905; aged 45; died, in May, at Oakland, Calif.

Archibald Cruickshanks, Fayetteville, Tenn.; Meharry Medical College, Nashville, 1912; aged 54; died, in May, of chronic nephritis.

Orson Lucius Crampton ✠ Mobile, Ala.; Bellevue Hospital Medical College, New York, 1865; Civil War veteran; aged 81; died, May 25.

John B. A. Tanguay, Providence, R. I.; University of Montreal Medical Faculty, Montreal, Que., Canada, 1869; aged 79; died, May 28.

Georgiana DeVilbiss, Thurmont, Md.; College of Physicians and Surgeons, Keokuk, Iowa, 1897; aged 56; died, June 3, of paralysis.

Thomas B. Mulloy, Newton, Ohio; Eclectic Medical Institute, Cincinnati, 1881; formerly mayor of Newton; aged 68; died, June 2.

Cynthia A. Miller, Mackinaw, Ill.; Hahnemann Medical College and Hospital, Chicago, 1884; aged 78; died, May 25, at Morton.

William C. Clarke, Cairo, Ill.; Rush Medical College, Chicago, 1895; for eight years city health officer; aged 54; died, June 2.

A. Edgar Tussey, McConnellstown, Pa.; University of Maryland School of Medicine, Baltimore, 1883; aged 65; died, May 29.

J. Algood Selby, Shreveport, La.; Vanderbilt University Medical Department, Nashville, Tenn., 1890; aged 64; died, June 1.

George G. Case, Lexington, Neb.; Eclectic Medical Institute, Cincinnati, 1881; aged 66; died, May 6, of cardio-renal disease.

Edward H. Muncie, Brooklyn; Eclectic Medical College of the City of New York, 1878; aged 70; died, May 29, of heart disease.

Irvin L. Magee, Venice, Calif.; Medical College of Ohio Cincinnati, 1883; formerly city health officer; aged 65; died, May 29.

Jesse Winslow Taft, Mount Dora, Fla.; Northwestern University Medical School, Chicago, 1897; aged 52; died, May 24.

Albert Noah Miller ✠ East Texas, Pa.; Belleuve Hospital Medical College, New York, 1878; aged 67; died, June 4.

William C. Baird, Fulton, Kan.; Eclectic Medical Institute, Cincinnati, 1872; aged 88; died, May 15, of senility.

William G. McKinney, Milan, Tenn.; Eclectic Medical Institute, Cincinnati, 1881; aged 77; died, March 25.

Edward J. Davis, Ontario, Calif.; Albany (N. Y.) Medical College, 1867; aged 82; died, May 6, of erysipelas.

Samuel M. Hooper Tyler ✠ Louisville, Ky.; Louisville Medical College, 1880; aged 68; died, May 26.

Flavius J. Marberry, Little Rock, Ark. (licensed, Arkansas, 1903); aged 65; was shot and killed, May 31.

Julius Sachs, New York; University of Wurzburg, Germany, 1885; aged 63; died, May 23, of uremia.

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Atussin. This is claimed to be an "extract of the subrenal gland" and the labelling leads one to infer that the extract is dissolved in cherry laurel water. No statement appears regarding the character of the suprarenal extract, nor is its quantity or the method of controlling the strength of the preparation declared. The following is typical of the claims advanced for the preparation:

"This product, greatly experimented, has obtained excellent and durable effects in diminishing and stopping rapidly, convulsive abscesses, as well as preventing broncho-pulmonary complications, so frequent in children attacked by whooping-cough."

Peptoproteasi. This, according to the manufacturers, is a "Hydrogliceric Solution of all the Ferments and Kinasis of the Gastric Mucose" and has "high digestive power through the stimulating substances of the gastric functions it contains." No statement is made in regard to the strength of the preparation either in milk-curdling, protein-digesting or starch-digesting power. The following is a claim advanced for this digestant:

"Because of its high digestive power, and because of the stimulating substances of the gastric functionality which it contains, [it] is useful in cases of total gastric *achilia* for atrophy of the mucose, especially it this medicine is given with hydrocloric acid. In nervous achilia the peptoproteasi not only will act because of the pepsine contained in it, but also, it will produce an active gastric secretion through a reflective action, that is, not only as a palliative, but also as a specific."

Paraganglina Vassale. This product is claimed to be the "juice of the medullar cromaffine substance of the subrenal capsules." No information is furnished as to the character of the product, its method of preparation, or of tests and standards whereby its composition may be controlled. According to a letter from the Neother Products Co. the preparation is "Used in dilation of the stomach, atony of the stomach, in gastro-intestinal atony, costiveness, cutaneous diseases owing to auto-poisoning, etc." No evidence for the efficiency of the preparation in these conditions is furnished.

Fosfoplasmina. This is described as a "direct extract of egg yolk. . . ." The label of the package contains the following formula: "Ovo laecitinum Gr. 0.30, Serum physiologicum Gr. 1.20." Although the futility of administering small amounts of lecithin has been fully established (Rep. Coun. Pharm. Chem., 1915, p. 122) the makers suggest that this preparation should be administered intramuscularly "in cases of neurasthenia, physical and intellectual exhaustion, chlorosis, anemia, cachexia, and general derangements of the nutrition." The further claim is made: "The sterility of all our hypodermic preparations is rendered ascertainable by a chemical revealer of the greatest efficacy, the Tellurito of potassium. . . ." It is claimed that Fosfoplasmina contains "the revealer of Gosio, that is the tellurium potassicum in doses of 1:100,000. In this quantity the tellurium not only does not cause harm, but, for its tonical action similar to that of arsenic, it strengthens the value of the remedy." No evidence is submitted, however, of the asserted value of potassium telluride.

Asmoganglina. This the manufacturers call an "extract of the subrenal and hypophysis glands." The label gives the alleged formula as: "Princ. act. partis medullaris gland, surrenalis Gr. 0.10; Pr. act. posterioris hypophisis Gr. 0.08; Serum physiologicum Gr. 1—." As the active principle of the hypophysis has not been isolated the statement of composition is obviously incorrect. There is nothing to show that the strength of the preparation is controlled. It is claimed that Asmoganglina "exercises a beneficial action upon the respiratory centers and has been utilized with previous results in bronchial asthma." No evidence is supplied to show why a combination of suprarenal and hypophysis should be given together. The circular accompanying the package states: "It has a specific action on bronchial asthma." The circular quotes Massalongo as follows: "There is no fit of bronchial asthma, however violent it may be, which in thirty or forty seconds cannot be completely overcome by an injection of Asmoganglina."

Endo-Ovarina Tablets. According to the label each of these tablets contain 0.03 Gm. of the active principle of the ovary. No information is given in regard to the isolation or the properties of this asserted "active principle" of the ovary. The following is typical of the extravagant claims that are made for this ovary preparation:

"Ovarian opotherapeutics makes a specific remedy against dismenorrhea, and especially against amenorrhea of girls in puberty; in these cases the preparation is to be given 10-15 days before the menstruation takes place. Young girls' chlorosis too, is treated efficaciously with ovarian opotherapeutics, which besides having a specific action upon the genital sphere promote the oxidating processes."

The booklet which the Neother Products Co. uses as advertising for these various preparations consists of one hundred and fifty-one pages and describes a great many products other than those submitted to the Council. The booklet is devoted to "opotherapeutics" which, it is stated, means "cure with juices." The pamphlet presents a jumble of fact and fancy and reads more like a "patent medicine" almanac than a scientific treatise. It contains an extensive therapeutic index in which is given the name of the disease and then opposite this, the name of the preparation (or preparations) recommended for that disease. For example:

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In some instances circulars wrapped with the trade package, advertise other products.

Atussin, Peptoproteasi, Paraganglina Vassale, Fosfoplasmina, Asmoganglina and Endo Ovarina Tablets are inadmissible to New and Nonofficial Remedies because (1) their composition is indefinite or semi-secret, (2) the therapeutic claims are unwarranted, and (3) their recognition would be the means of advertising proprietary products which are not accepted.

Local Immunity in Infectious Diseases.—According to our conception, vaccine therapy aims less at curing the diseased cells, but rather to the protection of those cells which are still well, that is, those cells which are in jeopardy of attack by the virus. In order to employ the vaccine in a rational manner, it should be applied to the region of the receptive cells, for instance, the skin in staphylococcus infection. It then tends to render the well cells refractory, that is, to desensitize them and so prevent them from entering into combination with the virus. In other words, the mechanism of vaccine therapy is to wall off the infection by rendering the well cells incapable of attack by the virus. Vaccine therapy operates, therefore, not by the treatment of diseased cells, as is generally thought, but by the protection of the well ones.—A. Besredka: *Tr. Roy. Soc. Trop. Med. & Hyg.* **17**:356 (March) 1924.

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The question of cerebral circulation, whether dependent on a vasomotor mechanism in addition to the general circulation, or solely on the general circulation, has been a matter of long dispute. However, Hürthle (*Arch. f. die ges. Physiol.* **44**:574, 1889), François-Franck (*Arch. de physiol. norm. et pathol.*, 1890) and others have shown that, after stimulation of the cervical sympathetics, they could produce local constriction or dilatation in the vessels of the brain. Weber (*Arch. f. Physiol.*, 1908, p. 457) used a plethysmograph to study the volume of the brain. On stimulation of the cervical sympathetics, of the cortical surfaces, and of various sensory nerves in animals, he observed such changes in brain volume as to lead him to conclude that the brain vessels possess both vasoconstrictor and vasodilator nerve fibers. Wiggers (*Am. J. Physiol.* **14**:452, 1905; **21**:454, 1908) perfused an isolated brain within a skull, with an artificial circulation. The addition of epinephrin caused a diminution in the outflow of the organ. This would mean that the epinephrin caused a constriction somewhere in the circulation. If, as some observers believe, epinephrin acts only on smooth muscle innervated by sympathetic nerve fibers, this would indirectly tend to furnish evidence for the existence of such fibers in the cerebral vessels. Using the same method, but with direct stimulation of the internal carotid sheath at its entrance into the skull, a similar result was obtained, which points toward the existence of constrictor fibers in the sheath of this artery. In view of these experimental facts, one must give some credence to the theory of cerebral angiospasm.

The blood pressure before the attack was 150 systolic and 70 diastolic, and remained unchanged following the attack. However, when the spasm occurred, there appeared a distinct and sudden left sided hemiplegia, i. e., paralysis, signs of pyramidal tract involvement and aphasia, only to disappear before our eyes, while recording the physical findings present during the examination. The attack seemed momentary; and, before the sphygmomanometer could be brought into the examining room, the entire picture had already changed. It is for this reason that the blood pressure reading could not be recorded during the attack, although it would have had no bearing on the diagnosis at the time.

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(The adhesive can be made waterproof with a 2 per cent. solution of potassium bichromate applied in the dark and then exposed to the light, or by means of liquor formaldehydi.)

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generally requires changing about the tenth, twentieth or fortieth day.

In THE JOURNAL, Sept. 27, 1919, p. 973, Dr. W. F. Cunningham describes a new adhesive material for this purpose, which he believes superior to the Sinclair formula. It consists of a solution of celloidin in acetone, which is thus prepared:

The required amount of celluloid scrap and acetone are placed in a *dry*, clean, wide-mouthed bottle and securely stoppered. The bottle is then shaken or agitated at intervals, and the solution is ready for use in from twenty-four to forty-eight hours. When properly made, it should be an almost clear, homogeneous, syrupy fluid. In the experiments, no careful preparation of the skin was made. It should, however, be absolutely dry; and the preliminary use of a few cubic centimeters of acetone in the region to be employed may aid in this respect, but is not necessary. A layer of celluloid solution is rapidly applied by means of a small, stiff brush. The quantity should be sufficient to soak through the strip on which traction is to be applied, and a thin coating should be applied externally to get out all the wrinkles and air bubbles. Canton flannel is the best material for strips, but a double layer of gauze or muslin that is neither too hard nor too finely woven may be used.

Iodin and also picric acid and alcohol should be avoided as far as possible on areas to which any type of adhesive is to be applied. Both these drugs increase exfoliation, and we well know the reaction of certain skins to the former. We believe, with Sinclair, that the part should not be shaved before adhesive material is applied, for the hairs, if abundant, increase the efficiency of the adhesive, like hair in plaster. If there is delay in putting on the strip, the skin should be recoated, for it dries out in a thin, flexible film in a minute or two. The application of a circular gauze bandage over cotton increases the effectiveness of adhesion and should be used. It is needless to state that the solution is combustible; therefore it should not be heated, and containers should be so labeled.

SENSITIVITY TO ADHESIVE TAPE

To the Editor:—A female patient had both feet strapped by a chiropodist, who used adhesive tape. That night the feet itched intensely, and next morning were much swollen. Removal of the strapping revealed the condition of the underlying skin different from that usually found; namely, small vesicles, which clear up under a dry dressing. Here the tissues were markedly inflamed, indurated, raised about one-quarter inch, very tender, and covered here and there with varying sized vesicles, which, when ruptured, discharged a thin, sticky substance. The condition has been obstinate. Treatment with calamine lotion with 2 per cent. phenol (carbolic acid) as a wet dressing increased the itchy condition, as also a sodium bicarbonate wet dressing. Solution of aluminum acetate in the weakest dilution was impossible, as the patient complained that it made her foot "burn" so severely that she could not continue with it. The condition has healed slowly; the area of healthy skin has a deep dark brown pigmentation, and one denuded area is obstinate and shows no tendency to heal. Have any similar cases been reported? The cause probably lies in an idiosyncrasy to adhesive tape or some irritant in the gum substance.

GEORGE H. JANTZEN, M.D., Queens, L. I., N. Y.

ANSWER.—We know of no similar cases. Such a thing might be produced by a vascular disturbance, such as thromboangiitis obliterans or Raynaud's disease, but in these cases there would exist evidences of bad circulation in the extremities. It might also be produced in a patient who had epidermolysis bullosa. Such a patient would give a history of blistering or other injury of the skin from unusually slight irritation. The same thing, of course, might be produced by excessive pressure from strapping. That would also be accompanied by cyanosis. There appear to be no records of cases of sensitization to adhesive plaster.

DOSAGE OF THYROID EXTRACT

To the Editor:—I wish to give a dose of thyroid extract to a child 3 years old, weighing 36 pounds, suffering with hydrocephalus. What size dose shall I give, and how often?

JOSEPH HALTON, M.D., Sarasota, Fla.

ANSWER.—Thyroid effects are generally obtained by the administration of Dried Thyroids, U. S. P. (Thyroideum Siccum). There is no fixed dose of thyroid for children of any definite age or weight. It must be determined in each case, as the amount of thyroid secretion in the individual or its deficiency varies greatly. A safe initial dose for a child 3 years of age would probably be 0.015 gm. (one-fourth grain) of dried thyroids two or three times a day. The average dose might perhaps be represented by the rough rule to give 0.06 gm. (1 grain) twice daily for a child under 1 year, and to add 0.03 gm. (one-half grain) for every year up to 5. As much as 0.3 gm. (5 grains) and even 1 gm. (15 grains) of dried thyroids have been given twice daily.

The best way is to start with a small dose and gradually increase it until either satisfactory improvement or symptoms of intolerance manifest themselves. These symptoms, somewhat in order of frequency, are: diarrhea or gastric irritability; undue restlessness, at times, uncontrollable screaming; and a rise in pulse frequency and in temperature. Whenever the temperature, which in cretinism often is subnormal, has risen by 2 to 3 degrees F., the dose should be diminished. A tendency to fainting should be looked out for, as this is a condition that may appear without any of the other signs or symptoms. Of course, the most scientific way of determining and controlling the dose is by a study of the basal metabolism.

As soon as the desired effect has been obtained or symptoms of intolerance manifest themselves, the frequency of doses may be reduced to once a day, then alternate days and finally every third day.

CHLORIN GAS FOR COLDS

To the Editor:—Can the Association give me any data on chlorin gas for colds, and if so, kindly give methods in which to use the same? I notice the space given to it in the daily papers, and have had many inquiries regarding it.

J. M. SUTTON, M.D., Lincoln, Kan.

ANSWER.—The only available article that has appeared in scientific medical literature regarding the method of treating colds with chlorin gas is that which appeared in THE JOURNAL, March 8, 1924, p. 764, entitled "Chlorin as a Therapeutic Agent in Certain Respiratory Diseases," by Drs. E. B. Vedder and H. P. Sawyer.

LONGEVITY OF BACTERIA

To the Editor:—Where may one obtain information regarding the longevity of certain disease-germs—for example, foot-and-mouth disease, anthrax, smallpox, typhus, plague bubonic and pneumonic, etc.? I have read that anthrax has been frequently communicated to paper-mill workers engaged in sorting rags from ports thousands of miles distant; this, if true, would certainly imply prolonged viability of the anthrax bacillus. Also, I have read that the modern street construction in London, involving the opening of ancient burial pits of plague victims, has sometimes resulted in outbreaks of disease. Also that in the great epidemic of pneumonic plague in Siberia about 1903-1904, the frozen bodies of the victims were piled on the frozen ground to await the spring, when burial would be easier, and that such deferred burial was often attended with fresh outbreaks. This would imply that the plague bacillus defies prolonged frost. These statements were on newspaper authority only.

R. B.

ANSWER.—The essential facts at hand regarding the longevity of pathogenic germs are accessible in current textbooks on bacteriology and clinical medicine. Jordan's General Bacteriology is recommended especially, because of its reliability.

The prolonged viability of the anthrax bacillus depends on the fact that its spores are among the most resistant of all bacterial forms. Anthrax spores are known to resist drying for at least ten or twelve years; they withstand the action of sunlight, heat and ordinary germicides much better than the bacilli themselves; fed to animals, spores may lead to infection while feeding spore-free cultures are without effect because the bacilli are killed in the stomach.

Not only may human infection result from handling contaminated hides, etc., and the use of contaminated shaving brushes, but several outbreaks of cattle anthrax have been traced to overflowing of pastures by streams draining tanneries, in which hides from countries where anthrax prevails were worked up.

The pest bacillus is easily destroyed by sunlight and disinfectants, and disappears speedily in the soil and in cadavers that are buried. Cultures in sealed tubes may live for years in the icebox. There is no evidence that outbreaks of the disease have resulted from the opening of old burial pits. Frozen bodies of plague patients might become the source of infection under special conditions, but the fact remains that pneumonic plague is essentially a droplet or respiratory infection, and that bubonic plague practically always is transmitted to man from rats by the rat flea.

Comparatively little is known about the resistance of the unknown virus of smallpox, and the same is true of the virus of typhus, which is transmitted to new victims by the body louse.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALABAMA: Montgomery, July 8. Chairman, Dr. S. W. Welch, Montgomery.

CALIFORNIA: San Francisco, July 7-10. Sec., Dr. Charles B. Pinkham, 908 Forum Bldg., Sacramento.

COLORADO: Denver, July 1. Sec., Dr. David A. Strickler, 612 Empire Bldg., Denver.

CONNECTICUT: Hartford, July 8-9. Sec., Regular Board, Dr. Robert L. Rowley, 79 Elm St., Hartford.

CONNECTICUT: New Haven, July 8. Sec., Homeopathic Board, Dr. Edwin C. N. Hall, 82 Grand Ave., New Haven; Sec., Eclectic Board, Dr. James E. Hair, 730 State St., New Haven.

DISTRICT OF COLUMBIA: Washington, July 8. Sec., Dr. Edgar P. Copeland, Apt. 104, Stoneleigh Court, Washington.

HAWAII: Honolulu, July 14-17. Sec., Dr. G. C. Milnor, 401 Beretania St., Honolulu.

ILLINOIS: Chicago, June 24-27. Supt. of Regis., Mr. V. C. Michels, Springfield.

INDIANA: Indianapolis, July 8-10. Sec., Dr. William T. Gott, No. 333 State House, Indianapolis.

MAINE: Augusta, July 15-16. Sec., Dr. Adam P. Leighton, Jr., 192 State St., Portland.

MASSACHUSETTS: Boston, July 8-10. Sec., Dr. Charles E. Prior, Room 144, State House, Boston.

NEW MEXICO: Albuquerque, July 14. Sec., Dr. W. T. Joyner, Roswell.

NEW YORK: New York, Albany, Syracuse, Buffalo, June 23-26. Chief Education Department, Mr. Herbert J. Hamilton, Albany.

NORTH CAROLINA: Raleigh, June 23. Sec., Dr. Kemp P. B. Bonner, Raleigh.

NORTH DAKOTA: Grand Forks, July 1-4. Sec., Dr. G. M. Williamson, Grand Forks.

OKLAHOMA: Oklahoma City, July 8-9. Sec., Dr. J. M. Byrum, Shawnee.

OREGON: Portland, July 1-3. Sec., Dr. Urling C. Coe, Stevens Bldg., Portland.

PENNSYLVANIA: Philadelphia and Pittsburgh, July 8-12. Sec., Dr. George Becht, Harrisburg.

RHODE ISLAND: Providence, July 4-5. Sec., Dr. B. U. Richards, State House, Providence.

SOUTH CAROLINA: Columbia, June 24. Sec., Dr. A. Earle Boozer, 505 Saluda Ave., Columbia.

SOUTH DAKOTA: Sioux Falls, July 15. Director, Division of Medical Licensure, Dr. H. R. Kenaston, Bonesteel.

UTAH: Salt Lake City, July 1. Director of Registration, Mr. J. T. Hammond, Salt Lake City.

VERMONT: Burlington, June 25-27. Sec., Dr. W. Scott Nay, Underhill.

WASHINGTON: Olympia, July 8. Sec., Mr. Wm. Melville, Olympia.

WEST VIRGINIA: Martinsburg, July 8. Sec., Dr. W. T. Henshaw, Charleston.

WISCONSIN: Milwaukee, June 24-26. Sec., Dr. J. M. Dodd, 220 E. Second Street, Ashland.

THE FUNDAMENTAL REQUIREMENTS OF AN EFFICIENT ROENTGEN-RAY SERVICE IN HOSPITALS

JAMES T. CASE, M.D.
BATTLE CREEK, MICH.

A roentgen-ray department requires equipment more or less complete according to the service it is expected to render. If it is expected merely to make "pictures" of dislocations and fractures, possible kidney stones or other opaque foreign bodies, the thorax, and other conditions in all of which the referring physician or surgeon feels himself perfectly able to make the interpretation, the equipment and personnel need not be very extensive; if the staff members desire to utilize the roentgen-ray aid available in a well equipped hospital to the fullest degree possible under modern conditions, a generous equipment, plenty of space and adequate personnel, both medical and technical, are absolutely necessary.

EQUIPMENT

It is needless to list the individual roentgenologic instruments required other than to say that an adequate roentgen-ray service demands a complete roentgenographic equipment (interrupterless transformer with a capacity of 75 or more milliamperes, a tube stand, a table and provision for stereoscopic roentgenograms of various parts, including the chest); fluoroscopic equipment for study in both the horizontal and the vertical position; viewing box; stereoscope, and a dark room for the loading and development of films. For occasional roentgen-ray treatments, the roentgenographic equipment may ordinarily be employed; but when there is much therapeutic work to be done, a separate room and separate equipment should be made available. Modern deep roentgen-ray therapy requires the installation of an apparatus capable of delivering to the tube a minimum of 4 or 5 milliamperes at 200,000 volts.[1]

There is now generally available generating apparatus not only capable of delivering the 200,000 volts at 5 ma. current needed for deep therapy, but also available for ordinary roentgenographic work, thus economizing space and apparatus. For small hospitals this generator may serve both the roentgenographic and the treatment rooms.

There is no question that the roentgenographic apparatus generally supplied up to three years ago (10-inch gap machines) may be employed satisfactorily for many roentgen-ray therapeutic purposes, especially in the treatment of superficially seated malignancies, various skin lesions, tuberculous glands and joints, and certain blood disorders, and even in the treatment of fibroids and some other causes of menorrhagia; but for deep therapy, in its true sense, as now employed at 200,000 volts or more, a specially constructed deep therapy apparatus must be supplied.

The matter of intensifying screens is an item of no small importance in roentgen-ray equipment. The initial outlay for screens is fairly large, but their careful and economical use leads to a great saving in tubes and a very marked improvement in the quality of those exposures which must be done more or less instantaneously to be of valuc.

The space in which to assemble and use the equipment is one to which too often only scant thought is given. Even in many of the larger hospitals today one finds all the different instruments outlined above crowded into such small space that it is difficult to pick one's way between the various pieces of apparatus. It is a wonder that we hear of so few accidents occurring in roentgen-ray departments. Some of these few, however, have been tragic. In some quarters there seems to be a hold-over of the idea of fifteen or twenty years ago that the roentgen-ray department, being more or less analogous to the photographic department, requires only one or two rooms for its functioning; and as new equipment has been acquired, it is thrust into the old cramped quarters. Hospital directors who begrudge the space demanded by the roentgenologist would do well to visit such institutions as the Battle Creek Sanitarium, the Mayo Clinic, and the University Hospital at Ann Arbor, indeed, almost any one of the larger teaching hospitals, to realize the importance conceded to the roentgen ray as demonstrated by the generous space allotted to this department.

It may be more or less tentatively stated that a hospital of fifty beds should have at least 400 square feet of floor space devoted to roentgen-ray work. Up to 150 beds, there should be not less than 650 square feet of floor space divided into rooms for treatment, roentgenography and fluoroscopy, dark room and office. Larger hospitals should have from 1,200 to 3,000 square feet, including treatment rooms, roentgenographic and fluoroscopic rooms, office, film loading and developing room, film consulting room, filing room, lavatories and waiting room, and a work room for mechanical developments. University and teaching hospitals need more space for the provision of the necessary equipment for teaching purposes.

It would be axiomatic to declare that no amount of luxurious equipment will make up for the lack of a competent physician-roentgenologist, or that the roentgenologist cannot render a

1. Since Aug. 1, 1923, I have had the privilege of employing a very powerful roentgen-ray tube. Thanks to the inventor, we have the first water-cooled Coolidge tube released for clinical use. This powerful tube is declared by the inventor to permit the employment of up to 50 ma. at a maximum of 250,000 volts, sustained output, continuously from one tube. In our actual work we have used only 30 ma. at this high voltage. It is apparent that this type of tube bids fair to displace the air-cooled tube nowadays commonly employed in deep therapy.

full measure of usefulness to the staff without adequate facilities. Furthermore, it is self-evident that the type and arrangement of the equipment will differ in the different classes of special hospitals; for the roentgen-ray department is but one of the clinical diagnostic departments, and the proper perspective must be maintained according to the ability of the hospital board to equip and staff its various sections.

ORGANIZATION

The hospital of fifty beds or more should certainly have a physician specializing in roentgenology. He may be only a visiting roentgenologist, having other work elsewhere; and in smaller towns he will probably be a man who devotes only part of his time to roentgenology, combining it with nose and throat work, anesthesia, pathology, radium therapy or some other specialty.

There are in the United States and Canada something like 2,000 hospitals of fifty beds or more. Are there available 2,000 physicians with special training in roentgenologic work to take charge of the roentgen-ray services in these hospitals? In the evident absence of any such number of available roentgenologists, it is recognized that in small hospitals, especially those situated in the smaller communities, no physician is available, however ideal it would be to have one. The staff members send their patients for roentgenologic study, each reading his own film records, and making his own fluoroscopic studies, if, indeed, any are made.

It is manifestly impossible and unthinkable to permit or expect any one but a physician to undertake the interpretations of the roentgen-ray findings with any hope of transmitting to the clinician all the help which the roentgen ray is capable of giving. There have been some notable exceptions to this statement, but they have numbered very few indeed; and with the ever widening field of roentgen-ray application, the usefulness of any one but a graduate physician for roentgen-ray interpretation is steadily decreasing. Even in the small community, where nowadays each physician makes his own interpretations, it would be not only ideal but in thorough sympathy with the principle of hospital standardization and mutual cooperation between physicians thereby involved, if the agreement could be reached that one of the physicians in the community should devote special attention to roentgen interpretation and act as consultant in this capacity. Even under these circumstances, the members of the hospital staff should not hesitate to avail themselves of consultation with roentgenologists more favorably situated in large centers, whose opinion could be obtained by sending roentgen-ray records and clinical data for consultation.

A hospital of 150 beds or more should not be considered completely staffed without a physician-roentgenologist who devotes full time to his work. He may devote his services to more than one hospital, but his major time and thought should be devoted to perfecting himself in his roentgenologic work and to reaching out into new lines of roentgen-ray development. He may spend only a few hours a day in the hospital, and the rest of his time in his office outside the hospital; or the hospital may wisely arrange for his private work to be conducted in the institution. Still larger hospitals should have the full time services of a physician-roentgenologist. Especially in this type of institution the roentgenologist may advantageously combine his roentgen-ray work with radium therapy and the various surgical procedures that are more commonly involved in the application of radium.

TECHNICAL HELP

The roentgen-ray technician should never attempt to extend his activities beyond the technical work into the domain of diagnosis. No matter how competent he is, it is manifestly no more proper for a roentgen-ray technician to attempt the interpretation of roentgen-ray findings than for a competent surgical nurse to undertake surgical operations. I have no doubt that there is here and there a surgical nurse who, under favorable conditions, could safely amputate a finger or a foot, or even a limb, or possibly remove the appendix; but this surgical nurse would be the last one to wish to undertake such a venture. Diagnostic work lies outside the province of the technician, whose interests and training should be centered on the care and manipulation of roentgen-ray equipment. His or her time will be more than fully occupied with the problems of the ever sought, but never attainable, perfection in roentgenographic technic.

Naturally, the roentgen-ray technician's work deals with roentgenography, not with fluoroscopy. A well trained technician will have a knowledge of the fundamentals of electricity, the principles of construction of roentgen-ray apparatus of various kinds and the care of the apparatus, the physics of light, a sufficient familiarity with anatomy intelligently to "place" his patient for examination, and an accurate knowledge of the exposure and development of roentgenographic films. Proficiency in this technic was formerly much more difficult of attainment when gas tubes, mercury breaks and other forms of interrupters, coils and static machines were employed; but, nowadays, the roentgen-ray equipment has become sufficiently standardized to permit standardization of roentgenographic technic.

A concerted effort should be made to establish a standard of training for roentgen-ray technicians, and provision should be made for proper certification of this training when it has been attained. In the smaller hospitals, one technician will suffice for all the manipulative work in the roentgen-ray department, and he or she may also be trained to do the clinical medical photography needed in such a hospital. Larger hospitals have the technical work divided among several helpers. In the highest type of roentgen-ray department there will be a place for a trained physicist to aid in the development of the technical roentgen-ray work and act as a guide in the technical aspects of research work in radium and roentgen-ray therapy.

INTERPRETATION OF FINDINGS

The technical work of the roentgen-ray department, including the production of the roentgenograms and the setting in operation of the fluoroscope, is but the preparation for the real medical work of the department, its real *raison d'être;* namely, the interpretation of the findings. The work of interpretation constitutes real medical roentgenology, and it must be done by a physician. The better the technicial work, the richer will be the roentgen-ray findings in information for the medical roentgenologist to interpret. The greater his training, the richer his clinical experience, the fuller his devotion to his work, the more will the medical roentgenologist see in the film and screen records of the case. Some do the fluoroscopic examinations in a perfunctory manner because they obtain from them little help; but the enthusiastic, well trained, experienced clinical roentgenologist will find in the screen study of his patient a veritable mine of information, and his ingenuity will constantly show him ways to reach out into yet unexplored fields.

The average physician of today is not well fitted to undertake roentgen-ray interpretation. This may be said even of many men into whose hands the roentgenologic interpretation is at present confided; but there are outstanding figures scattered over the country, and by no means all connected with large hospitals, who are by nature, education, previous experience in pathology, surgery or clinical medicine, as well as special training in roentgenology, armed with the necessary clinical knowledge to aid them in their technical work.

Unfortunately, there are in this country not many organizations interested in the preparation of roentgenologists. In

England, the University of Cambridge and the University of Liverpool have now established courses covering a year, leading up to an examination and a diploma in medical radiology and electrology. I hope the day will come when similar arrangements will be provided in North America. It would be a great help not only to roentgenology but to surgical and medical work in general if two or three universities, for instance, Pennsylvania, Toronto and California, would establish courses giving the necessary training in physics and technic and the clinical applications leading up to a similar diploma.

Roentgen-ray interpretation must be done by a physician who has had special training, if the roentgen rays are to be utilized to the fullest degree. The gynecologist, for instance, in making a bimanual examination of the pelvic organs, visualizes what he feels. In his mind's eye, he pictures in flesh and blood the mass which may be due to ovary, tube, fibroid, cyst, etc. In a similar way, the roentgenologist-interpreter must visualize in flesh and blood what he sees in shadow—not a crater, a defect, a displacement, an enlargement, a contraction, a thickening, a light or a shadow, but the actual lesion. He must see the ulcer, the cancer, the tumor, the stricture, the cavity. This is relatively impossible without a basis of experience in pathology or surgery.

The roentgen-ray department is not engaged in work of a kind in which the answer to the problem is found by looking up certain formulas or watching for the development of certain reactions; for the reactions when obtained (i. e., the film or screen image) still require interpretation. This takes the roentgen-ray work out of the general class of laboratories and puts it among the examining departments, such as the urologic, ophthalmologic and electrocardiographic. Indeed, it might be better if the term "roentgen-ray laboratory" were abolished and we spoke of the "roentgen-ray department" or the "roentgen-ray examining department." The primary object of a roentgen-ray department is not to make "pictures" but to supply information.

Much of the work leading to the production of this information should be done with the fluoroscopic screen. We see much fluoroscopy done in a perfunctory manner without any real appreciation of the value of its method. In many hospitals, the gloved hand of the examining physician is never placed beneath the fluoroscopic screen. The value of visualized palpation by the protected hand slipped under the fluoroscopic screen cannot be fully appreciated by one who has not done it. The ability to move the stomach, the bowel; to watch the excursions of the diaphragm, the beating of the heart, the ever changing shadows when one rotates a patient under the fluoroscopic screen; to observe the behavior of a joint or a fractured limb under fluoroscopic manipulation—all constitute advantages available under screen examination which cannot be overlooked or set aside. As hinted in an earlier paragraph, the circumstances may be such in some hospitals that the individual staff members must interpret their own findings; but here again I wish to suggest that the spirit of mutual help and cooperation will point a way by which at least one member of the staff can acquire special training for interpretation and assist his fellows in their work.

In the light of what has been said, it is apparent that the interpretation will be all the more valuable and helpful if the roentgenologist is furnished with the history and such clinical data as are available up to the moment of the roentgen-ray examination. The roentgenologist should not be treated as though he were perpetually on examination and each patient sent to him as a catch problem, but he should be looked on as a colleague and be provided with every fact likely to assist him not only in the interpretation of the case in hand, but also in his development into a better, broader, and more useful clinician.

THE RECORD

The record should be made in writing and should be furnished at least in triplicate—one copy for the attending physician, one copy for the roentgen-ray department, and one copy for the hospital archives. Whether or not the patient acquires a copy of this report will depend on the custom of the hospital. In the Battle Creek Sanitarium, we feel that the roentgen-ray report should contain only such statements as are susceptible of substantiation by film or screen examination. In other words, although the roentgenologist is furnished with all available clinical data to aid him in his interpretations, he must not in his written report overpass the bounds of the roentgenologic findings. The report, therefore, constitutes only a part of the clinical examination of the case, and the roentgenologic report, as such, has no business in the hands of the patient. The patient surely is entitled to a written summary of his case, this summary to be made by the clinician in charge of the case. In this summary, the roentgen-ray report should find its proper place.

To whom do the films or plates belong? Surely not to the patient, for he pays not for a "picture" but for an examination, and he is no more entitled to the "pictures" than he is entitled to the cover slides containing the microscopic sections of tissue in his case, or the smears of blood used for making ordinary or differential blood counts. The roentgen-ray films constitute only a part of the examination and really form a necessary part of the record. If we say that he is entitled to a copy of his roentgen-ray "pictures" merely because the roentgen-ray records are susceptible of being printed, why not extend the idea and give the patient a photograph of the proctoscopic or vaginal findings or a photograph of the eye-ground or the larynx or the pharynx? A relatively small outlay of cash will provide apparatus for making photographs in connection with proctoscopic, vaginal, cystoscopic and other similar examinations, and so on *ad absurdum*. As a matter of fact, the roentgen-ray films belong to the hospital where the patient's records are kept. Prints or films in the hands of patients lead only to false interpretations, confusing opinions, multiplicity of advice, and bad results. Wise laws are being passed in a number of states and provinces requiring the hospital to retain their roentgen-ray films for two years or more.

A film library should be organized and cross-indexed. It would be a very valuable thing if every hospital would have a film library of, say, 600 to 1,000 films, the library to be limited to this number of films, the films properly sorted out and classified according to the pathologic findings shown. I would suggest that the number of films be strictly limited and that no additions be made except where the additions are superior in quality or in rarety of lesion to films already in the collection which will be discarded for the new ones. Such a library, cross-indexed and with suitable notes, will prove of great value to the staff in many ways.

Frequent discussions concerning the work will be necessary, and, in my experience, as regards roentgen-ray work they are seldom lacking. A certain number of staff meetings each year should feature the roentgenologic work. The science of roentgenology is almost as broad as medicine itself, and every department should participate in the discussions.

Colorado January Examination

Dr. David A. Strickler, secretary, Colorado Board of Medical Examiners, reports the written examination held at Denver, Jan. 8, 1924. The examination covered 8 subjects and included 80 questions. An average of 75 per cent. was required to pass. Of the five candidates who took the physicians' and surgeons' examination, three, including one osteopath, passed, and two, including one osteopath, failed. Nine

candidates were licensed by reciprocity, and one by endorsement of credentials. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
St. Louis College of Physicians and Surgeons		(1922)	75.3
University of West Tennessee		(1922)	75
Osteopath			80.8

College	FAILED	Year Grad.	Per Cent.
University of West Tennessee		(1918)	63.1
Osteopath			70

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Denver and Gross College of Medicine		(1910)	Illinois
Georgetown University		(1922)	Dist. Colum.
National Medical University, Chicago		(1898)	Illinois
University of Indiana		(1923)	Indiana
University of Michigan		(1922)	Michigan
University of Minnesota		(1915)	S. Dakota
Marquette University		(1912)	Wyoming, (1913) Wisconsin
University of Budapest, Hungary		(1914)*	Iowa

College	ENDORSEMENT OF CREDENTIALS	Year Grad.	Endorsement with
Johns Hopkins University		(1922)	N. B. M. Ex.

* Graduation not verified.

District of Columbia January Examination

Dr. Edgar P. Copeland, secretary, District of Columbia Board of Medical Supervisors, reports the oral and written examination held at Washington, Jan. 8-10, 1924. The examination covered 16 subjects and included 80 questions. An average of 75 per cent. was required to pass. Of the nine candidates examined, seven passed and two failed. Three candidates were licensed by reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Georgetown University		(1923)	83.2
George Washington University		(1922)	76.3
Howard University		(1922)	83.1
Johns Hopkins University	(1921)	88.8, (1923)	86.1
University of Virginia	(1920)	89.5, (1923)	84.2

College	FAILED	Year Grad.	Per Cent.
Howard University	(1921)	69.8, (1922)	70.3

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Howard University		(1898)	Ohio
Chicago Homeopathic Medical College		(1884)	Iowa
Meharry Medical College		(1906)	Texas

Iowa January Reciprocity Report

Dr. Rodney P. Fagen, secretary, Iowa Board of Medical Examiners, reports that twelve candidates were licensed by reciprocity at the meeting held at Des Moines, Jan. 14, 1924. The following colleges were represented:

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Northwestern University		(1909), (1920)	Illinois
Rush Medical College		(1905)	Illinois
Kansas Medical College		(1913)	Kansas
St. Louis University School of Medicine		(1922)	Missouri
University of Minnesota		(1920)	Minnesota
John A. Creighton Medical College		(1901)	Nebraska
University of Nebraska College of Medicine		(1918), (1922)	Nebraska
University of Cincinnati College of Medicine		(1921)	Wyoming
Western Reserve University School of Medicine		(1921)	Ohio
University of Vienna, Austria		(1902)*	Kansas

* Graduation not verified.

Vermont February Examination

Dr. W. Scott Nay, secretary, Vermont State Board of Medical Registration, reports the written examination held at Burlington, Feb. 12-14, 1924. The examination covered 12 subjects and included 90 questions. An average of 75 per cent. was required to pass. Four candidates were examined, all of whom passed. Two candidates were licensed by reciprocity. The following colleges were represented:

College	PASSED	Year Grad.	Per Cent.
Georgetown University		(1923)	91.1
University of Vermont		(1923)	88.4
Montreal School of Medicine and Surgery, Canada		(1907)	81.3
University of Budapest, Hungary		(1918)*	90.1

College	LICENSED BY RECIPROCITY	Year Grad.	Reciprocity with
Tulane University		(1901)	New York
Albany Medical College		(1908)	New York

* Graduation not verified.

Book Notices

SELECTED ESSAYS ON ORTHOPAEDIC SURGERY. From the Writings of Newton Melmah Shaffer, M.D., F.A.C.S., Consulting Orthopaedic Surgeon, St. Luke's Hospital, N. Y. With Forewords by Dr. Lovett and Dr. Fisher, and Comments by Dr. Cotton, Dr. Nutt, Mr. Blagden, and Mr. Hardon. Cloth. Price, $5. Pp. 636, with illustrations. New York: G. P. Putnam's Sons, 1923.

This book is written from the standpoint of an orthopedic surgeon of wide experience, who represents a type of so-called conservative orthopedic surgery. It is a monograph consisting of papers written and published since 1877. The author's descriptions of tuberculosis of the hip and of the ankle joint, the former written in 1877, and the latter in 1882, are both clear and concise expositions, and are just as valuable today as they were when written. He reveals an unusual knowledge of the mechanical principles involved in tuberculous and other diseases of bones and joints, and exhibits unusual skill in the application of splints and braces used in the treatment of such conditions. The book consists of four parts: the first part on the spine, the knee, and reflex muscular contraction; the second, on hip and ankle joint diseases; the third, on clubfoot, flatfoot and nondeforming clubfoot; the fourth, on miscellaneous subjects, such as ununited fracture of the femur, elongation of the ligamentum patellae, dislocation of the semilunar cartilage of the knee, the treatment of arthritis of the knee, and hysteria as seen in orthopedic surgery. One is impressed by the writer's clear conception and deep conviction of the necessity of protecting joints affected by chronic disease from all forcible manipulation. He recommends correcting force in the line of contracture and gradual change in position of the limb as improvement occurs. In his paper on lateral curvature of the spine, written in 1880, there is given a classical description of the salient features of scoliosis, from both the clinical and the pathologic points of view. In his paper on Pott's disease, written in 1879, he gives an excellent clinical pathology of the disease, in which he describes four stages. He takes decided issue with the suspension method of treating this condition in order to produce correction. He is an ardent advocate of the anteroposterior support as furnished by the spinal brace, and he condemns the application of the plaster-of-Paris jacket. He believes that Pott's paraplegia can usually be cured in a large percentage of cases by means of the Taylor spine brace and the recumbent position, adding, however, that if one year of treatment has elapsed the chances of recovery under mechanical treatment are materially lessened. In regard to the question of the relationship between trauma and tuberculosis, the author believes that traumatism is not an important factor in the production of chronic joint disease, but only a superinducing one. The book is not suited to the needs of undergraduate students, but contains material of definite value to all orthopedic surgeons.

PROBLEMS IN TUBERCULOSIS. Administration: Diagnosis: Employment: Settlements. By Sir James Kingston Fowler, K.C.V.O., C.M.G., M.A., Consulting Physician, the Middlesex Hospital. Cloth. Price, $1.50. Pp. 64. New York: Oxford University Press, 1923.

This gives a short review of the work that has been done in tuberculosis in England. It contains chapters on diagnosis, infection, notification and other subjects of interest. The author emphasizes the large percentage of error in the diagnosis of tuberculosis of the lungs, as observed in army service during the late war, as well as in dispensaries and sanatoriums. The cause of this error, which in some instances amounted to as much as 75 per cent., the author thinks is the practice of refusing to admit tuberculous patients to general hospitals. Thus, the young physician has no means of perfecting himself in the study of pulmonary tuberculosis. The author observes, "Queer things may happen when a clinician who has scrapped his stethoscope calls in a radiographer who has not been a pathologist. Hinc illae lachrymae." Americans would do well to reflect on this. The last chapter of the book contains many aphorisms that are worth the reading; for instance: "A light occupation in the open air is seldom found." "Do gardeners look particularly healthy?" "When the governing class has learned the A B C of science, more may be hoped for from the general public."

HANDBUCH DER KINDERHEILKUNDE. Ein Buch für den praktischen Arzt. Herausgegeben von Prof. Dr. M. von Pfaundler und Prof. Dr. A. Schlossmann. II Band. Third edition. Paper. Pp. 773, with 210 illustrations. Leipsic: F. C. W. Vogel, 1924.

The second volume of this handbook of pediatrics is devoted almost exclusively to a consideration of infectious diseases. Prof. Bela Schick contributes the first article, on diphtheria. This paper is carefully prepared, well illustrated, and that part of the chapter which is devoted to the use of antitoxin is well worth careful reading. Schick's studies on this subject have shown that in the mild cases of diphtheria a patient requires only 100 units of antitoxin for every kilogram of body weight, though in this dose the serum produces immunity, not cure. In the severer forms, the dose should be increased to 500 units of antitoxin per kilogram of body weight. Thus, a child who weighs 20 kg. (44 pounds) should receive 10,000 antitoxin units. This dosage will neutralize the toxins that have been formed twelve hours previous to injection. Furthermore, Schick thinks that the antitoxin acts by diminishing virulence, though even in this dose it does not neutralize the toxin completely. On the other hand, he considers that repeated injections are superfluous, because, once the tissues are saturated with serum, everything has been accomplished which the antitoxin can contribute to the cure of the disease.

The chapter on scarlet fever, by Prof. Arthur Schlossmann and Dr. Selma Meyer, is complete in detail. The clinical course and the numerous complications are carefully described. There are also some interesting mortality statistics, indicating the death rate of scarlet fever in children for a period of years, and also a comparison of the death rate from this disease in various countries. We learn that in European Russia the death rate was 168 per hundred thousand inhabitants; in Roumania, 76.8; in England, 6.6; Switzerland, France and Holland, slightly more than 2. The authors consider the treatment in detail. They recommend reconvalescents' serum, and they point out that antistreptococcus serum has fallen into disuse in Germany. The chapter on measles is contributed by Professor Groer of Lemberg, and Professor Pirquet of Vienna. Like the previous chapters, this one is complete in detail, and is profusely illustrated. The Degwitz serum as a prophylactic measure receives careful attention. The authors, however, do not believe that the serum is of value in treatment. They emphasize that it is a prophylactic, and give minute directions for its preparation and use. Erythema infectiosum is described by Stoss. The same author considers the fourth disease, so-called Dukes-Filatow disease, without adding anything new.

There are excellent chapters on typhoid, and an interesting contribution on infectious icterus by Prof. J. Bauer of Hamburg. The same author writes a paper on dysentery. Whooping cough is considered by Knöpfelmacher. This contribution contains a carefully compiled clinical description. He submits a list of remedies, and is not convinced of the efficiency of the vaccine treatment. He believes that the antispasmodics in some cases give relief. He says that quinin has a good reputation and has stood the test of time, and that its use is still advocated by numerous clinicians. He suggests the use of diquinin carbonic ester, quinin ethyl carbonate or quinin tannate on account of their less objectionable taste. A soluble quinin may be given by suppositories or enemas. Knöpfelmacher is impressed with the advantages of heliotherapy, and suggests that the quartz lamp may, in some instances, be used with benefit in the treatment of this disease.

Congenital syphilis is considered in some detail by Zappert of Vienna. The chapter on encephalitis and poliomyelitis is written by J. Ibrahim of Jena, is a carefully and concisely written article, and is a valuable addition to the literature.

Typhus fever, malaria and Asiatic cholera are considered by Dr. Edmund Nobel of Vienna. Dr. Franz Hamburger of Gratz writes on tuberculosis and scrofulosis. Hamburger has been a close student, and is well qualified to write this chapter. He considers at great length the method of infection. He is fully impressed with the idea that the disease originates in infants and young children as a primary lesion, with secondary lymph node involvement. He sees a great similarity between the primary lesion of syphilis and that of tuberculosis in that the entrance of both these diseases into the body is characterized by an initial or primary effect. He gives a detailed description of the various tuberculin tests, and discusses the value of each from the standpoint of diagnosis. In former years, Hamburger wrote extensively on tuberculosis of infancy and childhood. In this paper he has treated the whole subject concisely, and has brought the material well up to date. This chapter should constitute an authoritative statement on all matters pertaining to tuberculous infection of infancy and childhood.

Considering this volume as a whole, it must be said that it includes a valuable group of articles pertaining to the infectious disorders of childhood. The papers are carefully written, well illustrated, and this volume, like its predecessor, will constitute an important reference book for students, teachers and practitioners of pediatrics.

SURGICAL PATHOLOGY. By Joseph McFarland, M.D., Sc.D., Professor of Pathology in the Medical Department of the University of Pennsylvania. Cloth. Price, $9. Pp. 701, with 435 illustrations. Philadelphia: P. Blakiston's Son & Co., 1924.

The original plan of presentation takes up, in Part I, largely congenital conditions, including various tumors related to them; in Part II, tumors in general, and, in Part III, the special pathology of various systems, although little is said of conditions discussed in previous chapters. The congenital conditions are taken up in an orderly manner, covering the various systems of the body, with their various defects, persisting structures and anomalies. The discussion on tumors is satisfactory. The section on special pathology is not so well balanced. There is an unusually large space devoted to the mammary gland, which, the author explains, is due to an overwhelming experience in consultations in regard to it. The illustrations are numerous and clear, but the majority are reproduced from articles whose authors are quoted in the text. A very satisfactory review of the best of the published work has been included. A little disappointment is felt at times in the failure of the author to express his own experiences. The book covers the subject that every medical student should study, but it is for those beginning to specialize in surgery that the book has chiefly been written. It fulfils this purpose.

HERNIA AND ITS RADICAL CURE. By J. Hutchinson, F.R.C.S., Consulting Surgeon, London Hospital. Cloth. Price, $3.75. Pp. 264, with 52 illustrations. New York: Oxford University Press, 1923.

This small volume is principally devoted to the treatment of inguinal, femoral, umbilical, ventral and obturator hernia. Brief consideration is given to fatty hernia, and hernia of the appendix, bladder, stomach and ovary. It is surprising to note that the author does not accept the saccular theory of inguinal hernia. He advocates nontransplantation of the cord in inguinal hernia operations, and states that local anesthesia should be used only in exceptional cases. The chief value of this book lies in the fact that it is the expression of the views and practices of one of the leading English surgeons. The case histories that Hutchinson cites, and the experiences that he relates, are the result of a long and active surgical practice, and should prove of interest to those doing general surgery.

PROBLEMS OF CHILD WELFARE. By George B. Mangold, Ph.D., Director, Missouri School of Social Economy. Second edition. Cloth. Price, $3. Pp. 602. New York: Macmillan Company, 1924.

The facts and statistics in this book are grouped under five different headings: the conservation of life; health and physique; training and education; child labor; juvenile delinquency, and problems of dependent children. Mr. Mangold views the child through the old telescopes of heredity and environment. He admits that little can be done to improve heredity, as in the case of eugenic measures, sterilization and moral instruction, and devotes himself to preventive and constructive methods in use in social work. Students of philanthropy will therefore find in his book quick references to existing conditions, such as age in reference to child mortality, and the use of the cottage system in institutional work. References at the end of each chapter on the subjects treated

should be helpful. Poverty, vice and constitutional ill health, as well as those brighter aspects of the social worker's field, recreation and vocational guidance, are some of the subjects covered. New activities, such as school facilities for the especially gifted, and the visiting teachers' movement, are outlined. The book arises from ethical conceptions such as "the right to normal life," and "the right to health," rather than from cold economic considerations. It has an altruistic tone, which those interested in social measures find pleasing.

ENDOSCOPIE OPÉRATOIRE DES VOIES URINAIRES. Par E. Papin, Ancien chef de clinique de l'Hôpital Necker. Paper. Price, 26 francs. Pp. 110, with 93 illustrations. Paris: A. Maloine et Fils, 1923.

This gives a complete review of all the methods for studying the urethra and urinary bladder by the urethroscopic or the cystoscopic route. The aseptic conscience of American surgeons will be somewhat offended by two illustrations in which a woman is shown with a ureteral cystoscope in the bladder and both ureters drained by catheters, the patient wearing silk stockings and a waist, without any aseptic covering of the table or of the body of the patient. While the author quotes almost all the urologists who have contributed to the development of endoscopic and cystoscopic manipulations, he reports tables, cystoscopic holders and various vesical instruments as his own, though devised by his predecessors in this work and on the market for many years. Some points are further elucidated by the interpolation of histories of pertinent cases. Some experienced authors will not agree with Papin that electrocoagulation of vesical tumors is always a painless procedure and does not call for any anesthetizing application. In general, this pamphlet furnishes a serviceable introduction to the field of endoscopic and endovesical operation.

Medicolegal

Liability for Both Injury and Malpractice—Sewing Garter Buckle in Wound

(Parkell v. Fitzporter et al. (Mo.), 256 S. W. R. 239)

The Supreme Court of Missouri, in reversing a judgment rendered in favor of the defendants, says that this was an action for malpractice in the dressing and treatment of injuries received by the plaintiff from being run on by an automobile driven and owned by one of the defendants, both of whom were practicing physicians and surgeons. The defendant who inflicted the injury called the other defendant to the hospital to assist him. The defense pleaded was a former recovery from the physician who inflicted the injury, in an action against him founded on negligence in the operation of his automobile. The instant case turned on the question of whether the damages caused by the malpractice charged in this case were included in the recovery had in the former case.

The duty of a surgeon to bring skill and care to the amelioration of the condition of his patient does not arise from contract, but has its foundation in public considerations which are inseparable from the nature and exercise of his calling. Although the relation of physician and patient may be, and is perhaps generally, created by contract, the duty of the physician when he assumes it is fixed by rules that operate independently of its origin. He may be employed by a stranger, or take up the burden of treatment for purely humanitarian reasons, yet his duty to have the requisite knowledge and to employ it with the care made necessary by the occasion is to his patient. This court knows of no case in which it is held that an action will not lie by the patient against the physician or surgeon for a violation of the duties resulting from the relation, notwithstanding that others have intervened in his employment.

This plaintiff had the right to sue the wrongdoer who inflicted the original injury to him by the improper management and operation of his automobile, for the damage necessarily resulting from such injury, and the surgeon who aggravated the injury by negligent or unskilful treatment, and to recover from each the amount of damages resulting from his own act or omission without prejudice to his separate right of action against the other. These causes of action are no less separable and distinct when the two wrongs are committed by the same person to the same victim. It would be dallying with justice to say in a case of this kind that a physician who injures another, ever so slightly, by running against him with an automobile, and thereafter undertakes to treat the injury, and in doing so inflicts serious and permanent disability by malpractice, could defeat an action for malpractice by showing that his patient had been guilty of negligence contributing to the original injury; yet that effect would seem to follow the conclusion that the malpractice merged in and became a part of the original wrong.

In substance, the original petition charged as the injury inflicted by the automobile that the bones of the plaintiff's leg were broken and shattered, and protruded through the flesh and skin, and a metal clasp from his garter, dirt and cinders from the street, and cloth from his clothing were driven into the wounds, whereas the instant petition charged that the defendant physicians negligently and unskilfully sewed these things in the wound, causing infection, gangrene and permanent injuries. These circumstances, so far from being necessary results of the injuries stated in the original petition, were entirely independent of those injuries, and were not even admissible in evidence in that case. This court finds no difficulty in arriving at the conclusion that the chauffeur who carelessly runs his automobile on another, inflicting a wound into which a metal garter buckle is driven, is guilty of a wrong independent of the wrong done by himself in the capacity of a surgeon in connection with another surgeon in carelessly, unskilfully and ignorantly sewing the garter buckle in the wound, and thereby inducing infection and gangrene, which in turn works permanent disability to the injured party. These two cases, that is to say, the action for malpractice in sewing the garter buckle in the wound and the action for negligently producing the same wound, are founded on two separate and distinct causes of action, having no necessary legal connection whatever, and the judgment and satisfaction in the action against the chauffeur does not bar the action for malpractice against these two surgeons.

Evidence of Intent in Dispensing "Morphin"

(Williams v. United States (U. S.), 294 Fed. R. 682)

The United States Circuit Court of Appeals, Fifth Circuit, in affirming the judgment appealed from, says that defendant Williams was convicted of violating Section 2 of the Harrison Narcotic Law, by selling to a named person one-sixteenth ounce of morphin, a compound of opium, not in the regular course of his professional practice as a physician, and not for the treatment of any disease, but for the purpose of satisfying the craving of one addicted to the use of morphin. The trial court admitted evidence of other sales and of administering morphin by the defendant to the same person on many other occasions shortly prior to the time of the sale in question. It was proper to allow proof that the defendant had either sold or administered morphin on previous occasions, as bearing on his intent. A practicing physician does not violate the act in question if he merely dispenses morphin in the course of his professional practice only; but it is a violation of the law for a physician to dispense morphin for the purpose of gratifying the appetites of those addicted to the use of it. The evidence of other sales was therefore properly admitted to show knowledge and an unlawful intent. A dealer, as distinguished from a physician, is authorized to sell opium or its derivatives only on a written order, and if he has not such order his intent is immaterial.

A variance did not arise by reason of the fact that the drug described in the indictment as "morphin" was technically designated by chemists as "morphin sulphate." It was unobjectionable for the indictment to describe the derivative of opium sold as morphin, because it is commonly known by that name. The indictment in this case was not at all like that in *Guilbeau* v. *U. S.*, 288 Fed. 731, in which the pleader, instead of using a general term in common use, made the description unnecessarily minute.

Society Proceedings

COMING MEETINGS

American Proctologic Society, New York, June 23-25. Dr. Joseph F. Montague, 540 Park Avenue, New York, Secretary.
Maine Medical Association, Portland, June 25-27. Dr. B. L. Bryant, 265 Hammond Street, Bangor, Secretary.
New Hampshire Medical Society, Manchester, June 24-25. Dr. D. E. Sullivan, 7 N. State Street, Concord, Secretary.
Pacific Northwest Medical Association, Vancouver, B. C., June 26-28. Dr. F. Eppler, 422 Paulsen Building, Spokane, Wash., Secretary.

AMERICAN SOCIETY FOR CLINICAL INVESTIGATION

Annual Meeting, held in Atlantic City, N. J., May 5, 1924

(Concluded from page 1990)

The Amount of Blood in the Lungs

DRS. CECIL K. DRINKER and JOSEPH T. WEARN, Boston: A variety of methods have been utilized to determine the total blood volume, and some of these are available for clinical use. Similarly, the stroke volume of the heart and rates of circulation have been measured under both clinical and experimental conditions. In spite of such advances as are inherent in the possession of these lines of information, we have as yet no knowledge of the amount of blood the lungs actually contain, under even the most simplified types of laboratory experimentation. Two years ago, Drinker, Peabody and Blumgart showed that the air space in the lungs of cats could be encroached on readily by blood, and they pointed out the significance of these experiments in explaining reductions of vital capacity in certain cases of cardiac disease. As a refinement of this experiment, we have devised a preparation, using the cat, which is essentially a "Starling heart" with the chest of the animal closed. With this preparation it is possible to obtain data on the amount of blood the lungs contain under conditions that are apparently quite normal, and on the degrees of increase and decrease this amount may show under different experimental conditions designed to simulate cardiac failure. These changes in pulmonary blood volume can be correlated with a number of other measurements, such as cardiac output, pulmonary arterial presure, venous pressure, and air volume of the lungs.

Some Factors Controlling Respiratory Rate

DRS. C. A. L. BINGER and G. R. BROW, and A. BRANCH, New York: An investigation of the cause of rapid breathing in lobar pneumonia has pointed to the need for the further study of factors controlling respiratory rate. It has been shown that anoxemia, change in acid base equilibrium, and reduction in lung volume do not wholly account for the rapid respiratory rate seen in lobar pneumonia. Evidence points to the existence of stimuli arising in the lungs and probably traveling up the vagus nerves as being responsible for the accelerated rate of breathing. An inquiry has been made into the nature of such stimuli. It has been found that obstruction in the pulmonary circulation (associated with reduction in lung volume) occasioned them. An investigation has been made into the relation of the rapid breathing resulting from obstruction to the pulmonary circulation (artificially produced in animals) and the consequent anoxemia. It appears, in these experiments, that the accelerated respiratory rate and the anoxemia are related to a common cause, still under investigation, and are not essentially dependent on each other.

Observations on Experimental Surgery of the Heart

DRS. S. A. LEVINE, E. C. CUTLER and C. S. BECK, Boston: A series of experiments has been carried out on cats, dogs and goats, with the purpose of determining various factors that might have a bearing on the development of a technic for operations in chronic mitral stenosis. Experiments were first completed with the idea that the entire circulation could be stopped by clamping it off at the base of the heart, the ventricle then opened, and the valve divided under direct vision. It was found that the heart could recover after ten minutes of such a closed circulation, but that the cortical centers would not stand over three minutes under such conditions. Experiments with a small-bladed, curved knife yielded an insufficiency of the mitral valve in a high percentage of animals. Experiments with an endoscope carrying a knife did not prove successful in our hands. The questionable clarity of vision did not enable us to produce accurate lesions in comparison to the added risk involved. Postmortem examination as long as nine months after the operation at which a valvular defect had been created showed that any artificially created defect tends to increase in size with time. There occurs retraction from the line of incision, with rumpling and thickening of the cut edge. Thrombi did not tend to occur on such healing valves. We saw only one thrombus in three years' work, and in that case a fatal septic process complicated the picture. The wounds in the pericardium and heart healed rapidly. Pericardial adhesions seemed to form only when hemorrhage or sepsis complicated the operation. If they became extensive, the clinical picture of an embarrassed circulation with the accumulation of fluid in the abdominal, pleural and pericardial cavities resulted. Animals in which insufficiency of the mitral valve was established presented the typical systolic murmur found in similar clinical conditions. Attempts to produce a stenosis either by operation (partial ventriculectomy at the auriculoventricular ring with plication), or by the use of implanted radium emanation seeds, have so far failed of satisfactory results. These experiments, which show the resistance of the heart to trauma, its ability to heal promptly, and the little likelihood of thrombus formation on the cut valves, lead us to hope that the clinical development of such procedures is justifiable and advisable in certain cases of human mitral stenosis. Further experiments have led to the development of an instrument that can remove a portion of the obstructing valve, and the latter method seems to us to offer considerable hope in the attack on the typically stenosed mitral valve with its calcareous deposits and dense fibrous structure.

The Electrocardiogram as an Aid in the Diagnosis of Adhesive Mediastinitis

DR. E. P. CARTER and F. R. DIEUAIDE, Baltimore: It has been known since the early days of the application of the string galvanometer to the study of the human heart that in normal persons there is a change, usually well marked, in the form of the record as secured in the three usual leads on changing the position of the subject. This is especially prominent in turning the subject in the reclining position from one side to the other. It was thought that this phenomenon might be of practical use in the diagnosis of adhesive mediastinitis, of which we have no very reliable clinical sign. Normal persons and patients have been examined from time to time during the last three years to test this possibility. No normal persons in whom there was not a definite change in the form of the electrocardiographic record on rotation of the body have been encountered. Five instances were found in which the record showed no definite change. In all of these, there were reasons for believing that the patient might have adhesive mediastinitis. Two of these patients died and were shown at necropsy to have this lesion. Opportunity to examine the other patients did not occur. The records of two patients with all the important clinical signs of adhesive mediastinitis showed a definite shift. One of these was found at necropsy to have an obliterative pericarditis, and the other to have no lesion of the pericardium. The possibility that very large hearts might not show this change has been considered. Records of nineteen patients with marked cardiac enlargement showed a definite shift. Eight of these were shown by postmortem examination to have very large hearts but no pericarditis.

The Association of Hypertension with Suprarenal Tumors

DRS. B. S. OPPENHEIMER and ARTHUR M. FISHBERG, New York: The conception that the suprarenal glands may be involved in the production of hypertension was based on the frequent finding of suprarenal hyperplasia in patients with hypertension. We have confirmed this. But the failure of biochemists to demonstrate hyperepinephrinemia in hyper-

piesia has resulted in the abandonment of this conception. We have studied two cases of hypertension, however, in which it seems difficult to deny the relation to suprarenal growths. In one adult, diffuse hyperplasia and multiple adenomas — one probably becoming malignant — were actually demonstrated at necropsy, while the other was recognized as one of those extraordinary cases of suprarenal cortical tumor with precocious puberty accompanied by masculine characteristics. In searching the literature for confirmation of this view, thirteen cases were found of suprarenal tumor associated with a hypertension for which no other cause was found. The tumor may be cortical (hypernephroma) or medullary. Of the three varieties of primary medullary tumors — sympathoblastomas, ganglioneuromas and paraganglioneuromas — only the latter are usually associated with hypertension. The occurrence of hypertension with both cortical and medullary tumors indicates that it is probably not due to hyperepinephrinemia. These fifteen cases are important, for they show that at least a small group of cases of so-called essential hypertension are associated with a disturbance of suprarenal function.

Phagocytosis of Erythrocytes in Pernicious Anemia

DRS. FRANCIS W. PEABODY and G. O. BROUN, Boston: It is generally recognized that pernicious anemia is associated with an extensive destruction of red blood cells, but the mechanism of this blood destruction has not yet been satisfactorily explained. Observations on the presence of hemolytic toxins in the serum and on alterations in the fragility of the erythrocytes fail to account for it adequately. It is noteworthy, therefore, that in typical cases of pernicious anemia another process—phagocytosis of red blood corpuscles by endothelial cells—has been found to be so striking that it must necessarily be considered as a very significant factor in blood destruction. While hemophagocytosis in pernicious anemia has been frequently described by pathologists, little attention has been paid to its possible rôle in the disease process. It occurs in various organs, but is quantitatively most important in the bone marrow. The endothelial cells may be engorged with erythrocytes, and several phagocytic cells are frequently found in a single high power field of a section of bone marrow. The phagocyted cells usually contain hemoglobin, and there is little hemosiderin in the bone marrow. Phagocytosis is best demonstrated in sections and in smears fixed before drying. Phagocytosis of erythrocytes is not the result of blood transfusion.

The Effects of Hemorrhage, Transfusion and Irradiation on the Production and Maturation of Red Blood Cells

DR. RAPHAEL ISAACS, Boston: The last step in the maturation of a red cell is the loss of a brilliant refractive granule (about 0.5 micron in diameter), which can be traced back to the nucleated stage. The granules, one to a cell, appear as deep black dots and can be seen in the fresh blood or fixed films, any stain being used. In health, about 0.3 to 0.7 per cent. of red cells in the peripheral circulation show this granule by itself. An increase above 2 per cent. suggests an abnormal demand for new red cells in the circulation. There is an increase within a few hours after a hemorrhage, a blood transfusion or the beginning of deep irradiation therapy. The increase of the red cells appearing in the "granule" stage, accompanied by a decrease in the red cells in the reticulum stage, indicates a good prognosis, sometimes days or weeks before the actual clinical effects are noted. A decrease in the cells in the "granule" stage, accompanied by an increase in the cells in the reticulum stage, points to an undesirable progression of the lesion.

Reference of Pain Produced at Different Points in the Esophogus, Duodenum and Proximal Jejunum

DRS. CHESTER M. JONES, PAUL H. MEANS and ROBERT G. VANCE, Boston: Pain was produced by inflating a balloon on the end of a duodenal tube. Localization of the position of the balloon was made by fluroscope. In the duodenum and jejunum, pain was localized with surprising exactness; in the esophagus, localization was less exact. The pain areas did not correspond in any way to the actual position of the balloon, and did not shift with changes in position of the subject. Cutaneous hyperesthesia was not observed. With few exceptions, pain was always referred to the front in the midline. When produced in the esophagus, it was substernal; at the cardiac end it was felt at the level of the sixth rib, and was described as similar to "heartburn." At higher levels it was referred to the midsternum and episternal notch. From the upper portion of the jejunum to the pylorus, the referred pain points moved progressively upward from the umbilicus to the xiphoid. Small changes in the position of the balloon were followed by definite shifts in the reference of the pain. Ulcer, gallbladder disease, and operative scars apparently modified the reference of pain produced below the pylorus. The results obtained correspond with the original work of Head and Mackenzie, but are more accurate.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL for a period of three days. No foreign journals are available prior to 1920, nor domestic prior to 1923. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested).

Titles marked with an asterisk (*) are abstracted below.

American Journal of Diseases of Children, Chicago

27: 421-539 (May) 1924

*Production of Purulent Meningitis in Rabbits. M. Kasahara, Kyoto, Japan.—p. 421.
*Production of Tuberculous Meningitis in Rabbits. M. Kasahara, Kyoto, Japan.—p. 428.
*Urobilin Excretion in Anemias of Infants and Children. M. H. Bass, B. S. Denzer and H. Herman, New York.—p. 433.
*Calcium Content of Breast Milk in Relation to Rickets. L. R. DeBuys and L. von Meysenbug, New Orleans.—p. 438.
*Subacute Intussusception. V. C. A. Bergstrom, New York.—p. 444.
*So-Called Idiopathic Cardiac Hypertrophy in Infancy. G. L. Carrington, Bryn Mawr, Pa., and E. B. Krumbhaar, Philadelphia.—p. 449.
*Tuberculous Pyopneumothorax in Infant. S. G. Ross and C. T. Crowdy, Montreal.—p. 456.
Health and Growth of Children in Institution. S. E. Katz and H. Gray, Boston.—p. 464.
Morphologic and Quantitative Study of Blood Corpuscles in New-Born Period. H. S. Lippman, Minneapolis.—p. 473.

Experimental Purulent Meningitis.—Kasahara asserts that subdural inoculation of virulent pyogenic organisms (pneumococci, *Bacillus coli, B. influenzae, B. pyocyaneus,* streptococci and staphylococci) by an atlanto-occipital injection causes purulent meningitis in rabbits. The picture of the spinal fluid of the infected rabbit closely resembles that of purulent meningitis in human beings.

Experimental Tuberculous Meningitis.—Subdural inoculation of tubercle bacilli by atlanto-occipital injection produced in the rabbit tuberculous meningitis, followed by paralysis and death. The changes in the cerebrospinal fluid were peculiar. Albumin and globulin increased in amount; sugar decreased in amount. The leukocytes (lymphocytes) were increased in number. There was an alteration in the chemical and cellular constituents. The picture closely resembles that of tuberculous meningitis in human cases.

Urobilin Excretion in Anemias of Infants.—According to Bass et al., the sum of the urobilin and urobilinogen excretion in the stools of normal children, obtained by the method of Wilbur and Addis, is less than 800 dilution units for children under 6 years of age; and less than 1,400 units for children under 11 years of age. There is no evidence of excessive blood destruction in the anemias of infancy as indicated by the urobilin excretion in the stools, determined by the method of Wilbur and Addis.

Calcium Content of Breast Milk.—In a study of the calcium content of breast milk, DeBuys and von Meysenbug found the average of "normal" milks to be 32.6 mg. per hundred cubic centimeters, with extremes of from 23.7 to 40.0 mg. The "rachitic" milks averaged 27.5 mg. with extremes from 18.4 to 39.6 mg. In grouping of milks according to the age of the infant, the calcium content diminished as lactation

progressed. The calcium content of milk from the white race as compared with that of the colored race shows a reduction in the latter race.

Subacute Intussusception.—Four cases of intussusception from eight to sixteen days' duration are presented by Bergstrom, three of which were ileocecal and one of colonic invagination. The first three occurred in infants from 6 to 8 months of age, and the fourth in a boy, aged 8 years. The three infants had been nursed from birth, and except for slight digestive disturbances had never been ill. In two of the patients, a tumor was found in the right and left lower quadrant, respectively, of the abdomen. Operation, performed on two patients eight days after onset, resulted favorably. The third case came to necropsy sixteen days after onset.

Idiopathic Cardiac Hypertrophy in Infant.—A case of so-called idiopathic cardiac hypertrophy is reported by Carrington and Krumbhaar, occurring in an infant, aged 12 months. A mild nephritis, myocardial fibrosis and anomalous coronary artery (arising from the pulmonary) are discussed as possible causes.

Tuberculous Pyopneumothorax in Infant.—The age of this patient was 5 months. Ross and Crowdy believe that this is the youngest patient in whom this complication has been reported. Close association with the father, who was suffering from open tuberculosis, was the evident reason for the early infection of the patient. The mode of entry of the infection was obscure. The necropsy findings showed no evidence of tuberculosis of the alimentary tract. The obvious and, therefore, attractive theory is that inhalation of droplets or dust carrying the tubercle bacilli resulted in a tracheobronchial lymph node infection by way of the pulmonary road. In favor of this is the history of a persistent cough from the age of 3 months, and the presence of shadows at the hilum in the roentgenogram. These shadows at such an early age are suggestive of tuberculosis. Finally, and what seems of most importance, there was a definite shadow in the middle of the left lung, which later was proved to be the center of the tuberculous lesion.

American Journal of Obstetrics and Gynecology, St. Louis

7: 505–636 (May) 1924

*Endometrial Tissue in Ovary. O. H. Schwarz and R. Crossen, St. Louis.—p. 505.
*Carcinoma of Uterus. G. W. Crile, Cleveland.—p. 528.
Radiation Therapy of Cancer of Uterus. U. V. Portmann, Cleveland.—p. 536.
Radium in Carcinoma of Uterus. T. E. Jones, Cleveland.—p. 541.
Relative Values of Irradiation and Radical Hysterectomy for Cancer of Cervix. J. G. Clark and F. B. Block, Philadelphia.—p. 543.
*Carcinoma of Body of Uterus. C. C. Norris and M. E. Vogt, Philadelphia.—p. 550.
*Solid Ovarian Tumors; Pathology. S. H. Geist, New York.—p. 567.
Id. Symptoms and Treatment. E. Bishop, Brooklyn.—p. 576.
*Is Eclampsia a Biologic Necessity? O. M. Gruhzit, Detroit.—p. 588.
Two Cases of Recurrent Cyst Adenoma of Liver. D. Hadden, Oakland, Calif.—p. 598.
Abdominal Hemorrhage from Ruptured Graafian Follicle Cyst. D. Hadden, Oakland, Calif.—p. 600.

Endometrial Tissue in Ovary.—In a group of 164 cases in which the gross specimen of the ovary could be studied more or less intact, Schwarz and Crossen found eleven cases with endometrial tissue and seven with hematomas of the endometrial type. Studying sections taken from cases in which gross specimens were not available, five cases with true endometrial tissue were encountered and four of the hematoma type. In the first group were placed those cases in which the endometrial tissue was found on the surface of the ovary, in the cortex of the ovary or lining a cyst. These cases presented chiefly those in which the endometrial tissue was limited to the surface of the ovary or involving only a very superficial portion of the cortex. There were four cases in which the endometrial tissue was found lining a cyst. An occasional gland was found below the lining epithelium. In the second group, the group of hematomas believed to be of endometrial origin, there were eleven cases. The structure of the wall in these cases is very characteristic and Sampson's descriptions are absolutely correct in this regard. The third group consisted of ovaries which showed no hematoma or tissue of the endometrial type but about which were present adhesions with considerable amount of old blood and adhesions in which the stroma was very cellular. Twelve cases were in this group. The fourth group includes those cases in which gland tubules were found in the ovary in varying number, usually well implanted in the cortex.

Analysis of Cases of Carcinoma of Uterus.—Out of 251 cases of carcinoma of the cervix observed by Crile and his associates, 220 were available for study of operability, mortality, etc. Radical operation was performed in sixty cases, palliative operation in 108 cases. The operative mortality—radical operation—was 6.7 per cent. The operability (radical operation) of these cases was 27.3 per cent. Twenty-three patients were heard from who were alive and well three years after treatment, sixteen of these after radical operation; seventeen were alive after five years, fourteen of these after radical operation. Of 106 fundus cancer cases, ninety-one were available for study. Radical operation was performed in seventy cases with an operative mortality of 8.6 per cent.; palliative operation in seventeen cases. Fourteen patients heard from were alive after three years, eleven after five years. In the case of any abnormal discharge after the menopause, Crile urges immediate vaginal hysterectomy followed by the application of radium.

End-Results of Uterine Fundus Carcinoma.—The results obtained by operation and irradiation in a series of 115 consecutive carcinomas of the body of the uterus are presented by Norris and Vogt, with special emphasis on the end-results. The percentage of three-year hysterectomy cures was 37.5 per cent., whereas in a like series, the irradiation resulted in 45 per cent. of three-year cures. The percentage of three-year hysterectomy cures in the early cases was 42 per cent. The operative mortality from hysterectomy was 7 per cent. and from radium 6 per cent. The total mortality from all causes in the entire series of 115 cases was 56 per cent. The total number of three-year cases was 86; of these 34.8 per cent. are now alive. It is emphasized that carcinoma of the fundus must be considered a relatively malignant form of cancer. The teaching that from 60 to 75 per cent. of these cures are permanent cures is regarded as being fallacious.

Solid Tumors of Ovary.—Fifty cases of solid ovarian tumor were studied by Geist, thirty-one cases of carcinoma, twenty-four primary and seven secondary. Of the primary tumors six occurred in preexisting cysts; in one of these latter cases there was a rupture of the cyst preoperatively. These were all papillary adenocarcinomas. Of the remaining eighteen, twelve were papillary adenocarcinomas and six were medullary. Three patients died shortly after operation, one of peritonitis. In ten cases, at the time of operation, there were already abdominal and omental metastases present. Most extensive metastases were found in the two youngest patients, 12 and 13 years old. There were four instances of carcinoma occurring in dermoids; three were squamous, one was medullary. There was one case of solid teratoma. There were nine cases of sarcoma; six fibrosarcoma, two round cell and one perithelial sarcoma. There were seven cases of benign tumor; five fibromas and two fibromyomas.

Eclampsia.—Gruhzit reviews the theoretical foundation and practical experience of others leading to the formation of new ideas concerning the etiology of eclampsia as based on transmission of hereditary factors which invariably lead to the iso-agglutination phenomena. It is shown that the incompatability between two blood groups on clashing produces in the test tube a new, more viscous fluid. It is assumed that a similar condition would occur in vivo on the passage of agglutinogen from the fetus to the mother's blood stream. The viscous colloidal state of blood can account for all symptoms, signs and pathology of eclampsia. The end-results of these changes produce stasis, congestion and decreased rate of metabolism, protein as well as carbohydrate. Experimental data on the blood typing from normal and abnormal pregnancies further tend to substantiate that the interagglutination may be at fault in true eclampsia, but not in nephritic toxemias or normal pregnancies. In fifteen clinically diagnosed cases of eclampsia or preeclampsia, the blood grouping in mother and her child was incompatible. In the cases of pregnancy toxemia with convulsions, blood grouping of the

mother and her child was compatible. In eighty-three cases of normal pregnancy blood grouping was compatible.

American Journal of Ophthalmology, Chicago

7: 337-424 (May) 1924

Localization of Foreign Body in Eye in Relation to Rotation Center. A. Verwey, Johannesburg, South Africa.—p. 337.
Cyclodialysis for Simple Glaucoma. R. Cords, Cologne, Germany. —p. 341.
Peripheral Iridotomy (Curran) and Subconjunctival Limbus Puncture in Treatment of Glaucoma. H. Gifford, Omaha.—p. 346.
Pathogenesis of Intrinsic Ocular Paralysis During Convalescence from Acute Infectious Diseases. J. de J. Gonzalez, Leon, Mexico.—p. 351.
Factors Determining Choice of Operation in Glaucoma. W. H. Luedde, St. Louis.—p. 353.
Sarcoma of Choroid. H. F. Hansell, Philadelphia.—p. 359.
Muscle Replacement in Correction of Squint; Report of Cases and Results. S. A. Agatston, New York.—p. 361.
Changes in Eyes of Rabbits Following Injection of Dead Tubercle Bacilli into Common Carotid Artery. W. C. Finnoff, Denver.—p. 365.
Iridotasis After Iridectomy. F. H. Verhoeff, Boston.—p. 373.
Glaucomatous Eye with Clouded Cornea but Deep Chamber. E. V. L. Brown, Chicago.—p. 373.
Rupture of Choroid. C. B. Williams, Mineral Wells, Texas.—p. 375.
Twins with High Hyperopia. M. Black, Denver.—p. 375.

Annals of Surgery, Philadelphia

79: 643-802 (May) 1924

*Continued Intravenous "Drip." R. Matas, New Orleans.—p. 643.
Significance of Jaundice in Surgery. G. de Takats, Budapest, Hungary. —p. 662.
*Intrathoracic Tumors. G. J. Heuer, Cincinnati.—p. 670.
*Tumors of Mediastinum in Children. L. W. Smith and J. S. Stone, Boston.—p. 687.
Treatment of Suppurative Peritonitis. J. A. Blake, New York.—p. 710.
Value of Roentgen-Ray Examination in Early Diagnosis of Postoperative Ileus. J. T. Case, Battle Creek, Mich.—p. 715.
Surgical Relations of Cholecystitis. J. B. Deaver, Philadelphia.—p. 726.
Amebic Liver Abscess; Two Cases in Connecticut. M. Lear and E. S. Merrill, New Haven, Conn.—p. 730.
Transverse Incision and Dependent Drainage in Appendicitis. A. E. Rockey, Portland, Ore.—p. 740.
*Recurring Hernia of Diaphragm. P. E. Truesdale, Fall River, Mass.—p. 751.
*Repairing Inguinal Hernia with Living Sutures from External Oblique Tendon. J. D. McEachern, Winnipeg.—p. 758.
*Cysts of Wolffian Body. F. Hinman, T. E. Gibson and A. A. Kutzmann, San Francisco.—p. 762.
Stricture of Female Urethra; Three Cases. W. S. Pugh, New York.—p. 770.
Wounds of Lower Extremity Communicating with Fracture or Joint. G. A. Carlucci, New York.—p. 779.
Simultaneous Dislocation of Both Shoulder Joints. A. P. Heineck, Chicago.—p. 788.

Continuous Intravenous Drip.—Matas directs attention to the value and advantages of the intravenous route for the direct and continuous instillation of fluids intended to replace the volume of lost blood, and for infusing stimulating, nutrient and medicated solutions in shocked, toxic, exhausted and dehydrated surgical subjects in whom the usual indirect avenues of the circulation and the tissues are either unavailable, insufficient or inefficient when there is urgent need of a prolonged prop to the circulation in the great emergencies or crises of surgical practice. Illustrative cases are cited.

Intrathoracic Tumors.—Eight cases of tumor of the thoracic wall, pleura and mediastinum are reported by Heuer: intrathoracic calcified cyst arising from the anterior mediastinum and projecting into the right thoracic cavity; recurrent osteochondrosarcoma of the tenth rib involving the pleura; intrathoracic, extrapleural xanthoma or xanthosarcoma; chondromyxoma or benign cyst occupying the upper half of the right thoracic cavity and arising presumably from the costavertebral articulations of the fourth and fifth ribs; pleural endothelioma, possibly sarcoma, arising in the upper right thorax; pleural endothelioma, and retropleural aneurysm of the descending thoracic aorta.

Tumors of Mediastinum in Children.—Smith and Stone report two cases. The first patient, a child, aged 4½ years, had a mediastinal teratoma. The second patient, aged 20 months, had a retropleural tumor, with extension to the retroperitoneal tissue. The origin and type of the tumor were uncertain. It was probably of pleural origin and in type might have been a papillary carcinoma of the left chest with metastases to the retroperitoneal tissues, or a mesothelioma.

Recurring Hernia of Diaphragm.—Truesdale reports a case in which he performed three operations on the same person for traumatic hernia of the diaphragm within a period of three years. In the first operation he closed the tear in the diaphragm with a running suture of catgut reinforced by three sutures of the same material. At the second operation he enlarged the opening, denuded the edges, then closed with catgut and interrupted sutures of silk. In the last instance he prepared the aperture in the same manner and closed the opening with interrupted sutures of silk reinforced by a running suture of chromic catgut. Six months after the last operation the child was once more apparently well.

Living Suture for Herniotomy.—McEachern raises a one-quarter inch wide strip of tendon, freeing it at the upper end and leaving it attached at the lower end to the pubic bone, and uses it as a suture.

Cyst of Wolffian Body.—The case reported by Hinman et al. was one of a true wolffian body cyst, as evidenced by the finding of primitive renal structures in its wall. The symptomatology consists chiefly of secondary compression phenomena, varying with the size and location of the tumor. These cysts may grow to a volume of 10 liters. Diagnosis is chiefly one of exclusion and is usually made at operation or on later pathologic study. Treatment consists of early and complete removal because of the tendency toward malignant degeneration in certain types.

Archives of Surgery, Chicago

8: 705-960 (May) 1924

*Radio-Ulnar Synostosis. C. B. Davenport, H. L. Taylor and L. A. Nelson, Cold Spring Harbor, N. Y.—p. 705.
*Septic Thrombophlebitis of Femoral Vein; Operative Treatment. E. H. Pool and F. J. McGowan, Jr., New York.—p. 763.
Formation of Decidua of Pregnancy in Adenoma Endometrioides Ovarii. F. Winestine, Berlin, Germany.—p. 772.
Ununited Fractures. W. C. Campbell, Memphis, Tenn.—p. 782.
*Gastric Ulcer Studies. L. R. Dragstedt and A. M. Vaughn, Chicago. —p. 791.
*Surgical Treatment of Tuberculosis of Genito-Urinary Tract. V. C. Hunt, Rochester, Minn.—p. 811.
Lipome of Thigh; Four Cases. K. Speed, Chicago.—p. 819.
*Pneumarthrosis as Diagnostic Aid. S. Kleinberg, New York.—p. 827.
Renal Circulation. R. K. Lee-Brown, Sydney, Australia.—p. 831.
Multiple Myelomas of Children. E. J. Berkheiser, Chicago.—p. 853.
Xanthomas. J. C. Bloodgood, Baltimore.—p. 882.
Tumors of Xanthoma Type. C. A. Garrett, Baltimore.—p. 890.
Differential Diagnosis Between Xanthomatous and Melanin Tumors from Frozen Sections. D. T. Smith, Baltimore.—p. 908.
Twenty-Third Report of Progress in Orthopedic Surgery. R. B. Osgood and others, Boston.—p. 918.

Radio-Ulnar Synostosis.—On the whole, the evidence presented by Davenport and his associates seems to favor the conclusion that there is some truth in all of the hypotheses formulated to account for this condition, and that radio-ulnar synostosis is a trait that, in different biotypes, depends on one, two or three factors; that it is usually an autosomal dominant (although the possibility that the "gene" for it may lie in the Y chromosome of certain families should be kept in mind), and that it is partially sex limited but variable in degree of expression, possibly owing to modifying factors. There are genotypical differences in various families, which thus belong to diverse biotypes. In one family, only one "gene" appears to be responsible for the synostosis. In most families, distribution is that of a two-gene trait; in one of the families, of a three-gene trait. The synostosis is always a dominant trait. Consanguineous matings are found in the synostotic families, and it is probable that they are especially frequent in them. Radio-ulnar synostosis appears to be a dominant partially sex-limited trait, which varies in degree of expression.

Septic Thrombophlebitis of Femoral Vein.—The clinical diagnosis in the case reported by Pool and McGowan was duodenal ulcer and chronic appendicitis. The ulcer of the duodenum was excised and the appendix was removed. On the sixteenth day, the temperature rose suddenly to 104 F. and then followed a septic course, ranging from 99 to 105 F. until the sixty-third day after operation. The patient was markedly septic and weak. He was repeatedly examined without anything definite being found until after four weeks, when evidence of phlebitis of the internal saphenous vein was noted. Blood culture showed hemolytic streptococci. On the sixty-third postoperative day, the left femoral vein was exposed, ligated and opened and the thrombus was removed.

Following operation, the patient improved wonderfully. Later, a left popliteal abscess containing hemolytic streptococci was incised and drained. Following this, the temperature remained normal, and improvement continued. The phlebitis was presumably secondary to some undiscovered focus. The popliteal collection was evidently the result of a slow suppurative, retrograde thrombophlebitis from the site of ligation downward.

Experimental Gastric Ulcer.—The experimental evidence presented by Dragstedt and Vaughn seems fairly conclusive that in dogs an experimental ulcer in the stomach may increase the secretion of gastric juice brought about during the digestion of a meal. When the acidity of the juice was abnormally low to begin with, the production of the lesion may raise the acid concentration. A true hyperacidity in the sense of a gastric secretion with a higher concentration of hydrochloric acid than is found in normal pure gastric juice was never observed.

Tuberculous Epididymitis.—Sixty-six cases of tuberculous epididymitis are analyzed by Hunt. Sixteen patients had had unilateral castration for definite or suspected tuberculous epididymitis from three months to fifteen years before; ten had associated renal tuberculosis; five had had a nephrectomy for renal tuberculosis from nine months to four years before, and twenty-two had definite digital evidence of involvement of the vesicles or prostate. Bilateral epididymectomy was performed in eighteen cases, left epididymectomy in seventeen, right epididymectomy in sixteen, bilateral castration in one, left castration in four, right castration in five and right castration and left epididymectomy in five. The condition of forty-nine of these patients has been ascertained. There was a persisting sinus in but one case. The testicle was slightly smaller in 40 per cent.; there was no change in the size in 52 per cent., and it was slightly enlarged in 8 per cent. In cases in which there was unilateral epididymitis at the time of operation, the opposite epididymis remained free from infection for from one to five years, except in two, and in one of these castration was performed subsequently. There have been no urinary symptoms in 80 per cent. In 66 per cent., there has been a gain in weight of from 10 to 25 pounds. Only one patient has lost weight. Eighty-eight per cent. of the patients are well or markedly improved. One patient only is worse, as a result of general tuberculosis, which was present at the time of operation.

Pneumarthrosis: Aid in Diagnosis.—A case is reported by Kleinberg to emphasize the usefulness and the harmlessness of pneumarthrosis. It is not intended that this proceedure be used indiscriminately or without due regard to asepsis, and it is unwarranted when the diagnosis is clear. But it is very helpful in many obscure conditions and is not being employed so often as it should be, because it is not generally appreciated that the inflation of a joint with oxygen is both simple and free from danger. The special interest in the case cited is due to the opportunity of again demonstrating roentgenographically a pathologic cartilage.

Boston Medical and Surgical Journal

190: 771-818 (May 8) 1924

*Quinidin in Auricular Fibrillation. J. Wyckoff and M. Ginsberg, New York.—p. 771.
Chronic Peptic Ulcer. J. B. Deaver, Philadelphia.—p. 776.
*Prolapse of Intestine Through Patent Omphalomesenteric Duct. G. D. Cutler, Boston.—p. 782.
Postinfantile Tetany Associated with Chronic Pyloric Obstruction. R. W. Belknap, Damariscotta, Me.—p. 784.

190: 819-864 (May 15) 1924

Isolation and Concentration of Specific Antibodies of Antipneumococcus Serums. L. D. Felton, Boston.—p. 819.
Acute Pyogenic Parotitis in Otherwise Healthy Persons. R. G. Spurling and F. W. Stewart, Boston.—p. 826.
Diminution in Heart Size in Circulatory Collapse: Case. G. Wells and B. Gordon, Boston.—p. 831.
Value of Roentgen Ray in Pulmonary Diagnosis. R. Clifford and M. Ritvo, Boston.—p. 833.

Quinidin in Auricular Fibrillation.—Wyckoff and Ginsberg report two cases of sudden death following quinidin medication. A young man of 20, without heart failure, with rheumatic heart disease, mitral disease with stenosis and regurgitation and a large heart, having received 2.4 gm. quinidin sulphate in twenty-six hours with no toxic symptoms, died suddenly twelve hours after the last does and six hours after last observed by a physician (at which time the auricles were still fibrillating). A man of 44, with rheumatic heart disease, mitral disease with stenosis and regurgitation and a large heart, having received 2.2 gm. quinidin sulphate in twenty-four hours, suddenly became comatose one hour after the last dose, with marked slowing of respiration and return of normal heart rhythm. There seemed to be no paralysis. After nine minutes the patient had Cheyne-Stokes respiration for a short time. This later became normal. Heart rhythm, which was normal after onset of coma, became very rapid in about two hours but was still regular. This rhythm continued for twelve hours when the auricles again began to fibrillate. He died without regaining consciousness. Necropsy was refused in both cases. The mechanism of death in either case is not known. A third patient collapsed suddenly after the fifth dose of 0.4 gm. quinidin administered inside of eight hours. This patient recovered.

Prolapse of Intestine Through Patent Omphalomesenteric Duct.—The condition reported by Cutler is exceedingly rare and represents a prolapse or inversion of the intestine through a patent omphalomesenteric duct, opening on the side of the umbilical cord, in association with an umbilical hernia. The patient was only four hours old when first seen by Cutler. An operation was made immediately. It was impossible to reduce the prolapsed Meckel's diverticulum and intestine through the ring at the side of the cord, so an incision was made into the sac formed by the dilated cord. Then the loops of the small intestine were pushed back into the abdomen, except for the two portions which entered the Meckel's diverticulum. The ring in the side of the cord was incised and the prolapse easily reduced. The adherent portion of the diverticulum was resected between clamps and the hole in that part attached to the intestine was closed with a stitch of catgut reinforced by a continuous silk stitch to the serosa. The umbilical ring had to be incised to permit replacement within the abdominal cavity of the portion of the intestine and Meckel's diverticulum which had never been within the abdomen. Reduction accomplished, the cord was trimmed off. Vessels which did not bleed were tied. The peritoneum and fascia were sutured and the skin edges approximated. The baby recovered from the operation, but after a week it developed a facial erysipelas and bronchopneumonia, and died.

Canadian Medical Association Journal, Montreal

14: 363-468 (May) 1924

Metabolism of Diabetes. A. B. Macallum.—p. 363.
Indications for Radical Mastoid Operation in Chronic Purulent Otitis Media. H. H. Burnham.—p. 367.
Management of Toxemia in Later Months of Pregnancy. J. D. McQueen.—p. 371.
*Glycosuria in Pregnancy. I. M. Rabinowitch.—p. 375.
Progress of Mental Hygiene in Manitoba. W. M. Musgrove.—p. 377.
Indications for Tonsillectomy; Criticism of Operation. G. H. Lonsdown.—p. 379.
Treatment of Fractures of Leg. H. P. H. Galloway.—p. 383.
Blood Transfusion. G. H. Agnew.—p. 388.
Parotid Calculi: Case. W. H. Irvine.—p. 392.
*Nevi Treatment by Radium. H. MacKay.—p. 394.
Control of Diphtheria. R. H. Mullin.—p. 398.
Standardization and Value of Thyroid Preparations. A. T. Cameron.—p. 407.
Relation Between Width of Pupil and Carbon Dioxid Content of Blood. W. Bourne.—p. 411.
Enuresis. A. E. Chandler.—p. 413.
Dehydration Anemia. A. H. MacCordick.—p. 416.
*Acute Boracic Acid Poisoning (Fatal). A. T. Bazin.—p. 419.
Etiology of Scarlet Fever (Review). H. B. Cushing.—p. 421.

Glycosuria in Pregnancy.—Of twenty-four cases of glycosuria found in pregnancy with absence of other clinical signs and symptoms suggestive of diabetes mellitus, sixteen showed lowered thresholds. The fact that in four cases definitely diminished tolerances for sugar were found, Rabinowitch thinks further emphasizes the accepted teaching that persons having glycosuria, should be regarded as diabetic and treated accordingly until proven otherwise.

Radium Therapy for Nevi.—MacKay regards radium the remedy of choice for the removal of superficial vascular nevi. In the case of young children it may be applied during sleep.

Acute Boracic Acid Poisoning.—Bazin relates the case of a boy, aged 15, who was troubled with constipation. His physician ordered an enema given twice a day. The enema consisted of six teaspoonfuls of boracic acid powder in six cups of water. Two enemas were expelled with bowel movements. On the evening of the second day the child began to vomit, vomiting every hour very offensive material. On the next day a skin rash appeared. This rash was a bright red, and diffused generally over the body surface, being more marked on the trunk, front and back. On the fourth day the boracic acid enemas were discontinued and proctoclysis substituted. The vomiting ceased and the rash commenced to fade. On the sixth day two other boracic acid enemas were administered and the rash was again intense. The patient was very ill; vomiting was continuous. There was high fever and abdominal pain. The patient was very dull and stuporous. The general condition on the morning of the seventh day was still more serious; the patient was comatose, vomiting was frequent, and the pulse was rapid and small. Two more boracic acid enemas were given and were not expelled. The diagnosis made was that of "acute boracic acid poisoning." Nine hundred cubic centimeters of 5 per cent. glucose saline solution was administered intravenously with improvement in pulse. On the following morning an intravenous injection of 950 c.c. of Ringer's solution was followed by improvement in the pulse, and cardiac stimulants were administered hypodermically. However, in spite of treatment, the boy died in the afternoon of the eighth day after the first enema was given.

Illinois Medical Journal, Oak Park

45: 305-380 (May) 1924

Differentiation Between Quick and Dead. G. W. Crile, Cleveland.—p. 327.
Arterial Hypertension. W. A. Jenkins, Louisville, Ky.—p. 330.
Control of Tuberculosis. G. S. Wightman, Chicago.—p. 337.
Public Health Nursing in Illinois. M. D. Reiseman, Springfield.—p. 343.
Illinois Campaign for Education of Lay Public. C. J. Whalen, Chicago.—p. 349.
Roentgen Ray in Treatment of Impaired Hearing. J. J. Richardson, Washington, D. C.—p. 353.
Operative Treatment of Fractures. F. J. Cotton, Boston.—p. 357.
Review of Treatment of Syphilis. B. Shafer, Chicago.—p. 359.
Insulin Treatment of Diabetes and Its Complications. O. P. J. Falk, St. Louis.—p. 365.
Treatment of Pneumonia. S. L. Gabby, Elgin.—p. 367.
Treatment of Lacerated Wounds of Scalp. W. H. Byford, Chicago.—p. 370.
Labyrinthine Vertigo Without Middle Ear Pathology. F. L. Alloway, Champaign.—p. 371.
Focal Infections of Head. E. E. Poos, Belleville.—p. 373.

Iowa State Medical Society Journal, Des Moines

14: 191-234 (May) 1924

Medical and Surgical Aspects of Biliary Apparatus. W. J. Mayo, Rochester, Minn.—p. 191.
Mysteries of Abdomen. J. B. Deaver, Philadelphia.—p. 195.
Spleen Function and Its Relation to Spleen Surgery. E. R. Shannon, Waterloo.—p. 199.
Relation of Heredity to Disease in Man. J. S. Weingart, Des Moines.—p. 204.
Value of Roentgen Ray to Eye, Ear, Nose and Throat Specialist. B. Allen, Iowa City.—p. 210.
Bilateral Peritonsillar Abscess. Case Report. H. G. Langworthy, Dubuque.—p. 214.
Relation of Focal Infections to Kidney. J. Crawford, Cedar Rapids.—p. 215.
Management of New-Born Infants. R. Taylor, Minneapolis.—p. 218.
Syphilis: Negative Wassermann Blood Tests Following Arsenic Rashes. R. E. Jameson, Davenport.—p. 220.

Johns Hopkins Hospital Bulletin, Baltimore

35: 133-164 (May) 1924

*Blood Chemistry During Pregnancy. H. J. Stander, Baltimore.—p. 133.
*Atypical Distribution of Varicella Lesions Dependent on a Coexistent Syphilitic Infection. W. S. Tillett and T. M. Rivers, New York.—p. 137.
*Effect of Methyl Guanidin on Blood Pressure. R. H. Major and W. Stephenson, Kansas City, Kan.—p. 140.
*Changes in Human Oviduct During Menstrual Cycle and Pregnancy F. F. Snyder, Baltimore.—p. 141.
Acute Exanthem of Leprosy. F. de P. Barrera, Agua de Dios and A. P. Chavarria, Bogota, Colombia.—p. 147.
Experiments on Extrahepatic Formation of Bilirubin. E. H. Oppenheimer, Baltimore.—p. 158.

Blood Chemistry During Pregnancy.—The results of routine blood analyses carried out on fifty-three patients are recorded by Stander. Conditions obtaining in normal gestation, as well as in the several toxemias of pregnancy, were studied. In normal pregnancy the nonprotein nitrogen, as well as the urea nitrogen content is less than in the nonpregnant woman. The uric acid is about the same as in the nongravid person, while the carbon dioxid combining power drops from 52 to 45 volumes per cent. In neurotic vomiting the figures show an increased value for the nonprotein nitrogen and uric acid in the fairly severe cases. These return to within normal limits as the patient improves. The nonprotein nitrogen tends to increase in nephritic toxemia and to an extent fairly proportional to the severity of the condition; whereas, in the definitely preeclamptic type of toxemia, this tendency is not so strinking. In true eclampsia fairly normal values are found for nonprotein nitrogen and the carbon dioxid combining power. The uric acid content of the blood is definitely elevated in all three types of toxemia, nephirtic, preeclamptic and eclamptic.

Syphilitic Eruption Determines Seat of Varicella Lesions.—A case of varicella is reported by Tillett and Rivers in which the eruption was most marked over the face, scalp and extremities instead of over the trunk. The unusual distribution of the lesions in this case is believed to have been dependent on a coexistent syphilitic infection.

Effect of Methyl Guanidin on Blood Pressure.—Several records of the effect of methyl guanidin on the blood pressure in man were obtained by Major and Stephenson. The substance was injected intravenously, in doses varying from 0.045 gm. to 0.08 gm. per kilogram. No unpleasant symptoms, aside from a sense of slight fullness in the head and a slight pounding of the heart, were noted. The systolic and diastolic pressures were promptly elevated and these elevations persisted for one hour. The systolic blood pressure was elevated in these observations from 30 to 50 mm., and the diastolic pressure from 15 to 20 mm.

Changes in Oviduct During Menstruation and Pregnancy.—Snyder's observations give no support to hypotheses which explain sterility and pathologic conditions of implantation on the basis of alternations in ciliated and nonciliated (secretory) phases in the epithelium of the tubes.

Journal of Cancer Research, Lancaster, Pa.

8: 1-136 (April) 1924

Strain and Family Differences in Susceptibility to Sarcoma Cysticercus. M. R. Curtis and F. D. Bullock, New York.—p. 1.
Dosage One and Two Centimeters Under Skin from Unfiltered Roentgen Rays. W. Stenstrom, Buffalo.—p. 18.
Flexible Arrangement for Simultaneous Radiation of Patient with Three Tubes. W. Stenstrom and T. Mueller, Buffalo.—p. 22.
Consideration of Body Dose in Radiation Therapy. W. Stenstrom, Buffalo.—p. 30.
Reaction of Cancer Cell. W. H. Woglom, New York.—p. 34.
Cancer; Parasitic Theory. W. Meyer, New York.—p. 45.
Roentgen-Ray Spectra with Certain Filters. H. M. Terrill and M. Pine, New York.—p. 68.
Genetics of Tissue Transplantation in Mammals. C. C. Little, Orono, Me.—p. 75.
Primary Spontaneous Tumors of Uterus in Mice. XIX. M. Slye, H. F. Holmes and H. G. Wells, Chicago.—p. 96.
*Experiments on Pathogenesis of Epithelial Growth. I. K. Yamagiwa and K. Murayama.—p. 119.
Influence of Lanolin Feeding on Formation and Development of Tar Cancroid on Ear of Rabbit. K. Lee, T. Fukuda and R. Kinoshita.—p. 127.
Relation Between Lanolin Feeding and Formation of Cancroid by Painting Back of Mouse with Tar. M. Kashiwagi, T. Fukuda and J. Owaga.—p. 131.

Pathogenesis of Epithelial Growths.—In the course of five years of experimentation on 188 animals, Yamagiwa and Murayama have succeeded in producing in rabbits twenty-three cases of cancroid and adenocancroid of the mammae resembling the lesions observed in man. These epitheliomas were produced by injection into the mammary glands of liquid tar extract, pure tar, mixture of tar and lanolin, liquid paraffin containing tar, olive oil or liquid paraffin, in doses of from 0.3 to 0.5 c.c.; this injection was made once or twice a month. The development of epithelioma in 12.23 per cent. of the animals injected is considered a high average.

Journal of Laboratory and Clinical Medicine, St. Louis

9: 513-590 (May) 1924

*Chronic Typhoid Carrier State Following Typhoid Infections in Vaccinated Persons. J. S. Simmons and J. D. McCarthy, U. S. Army.—p. 513.
Studies on Autonomic System. II. Reaction of Excised Surviving Small Intestine of Turtle to Autonomic Poisons. G. B. Roth, Cleveland.—p. 519.
*Water Excretion as Influenced by Blood Pressure Response to Sodium Nitrite. E. C. Mason, Rochester, Minn.—p. 529.
*Flocculation Test for Syphilis. C. B. McGlumphy, Chicago.—p. 539.
*Effect of Thyroidectomy on Calcium Content of Blood Serum. I. M. Rabinowitch, Montreal.—p. 543.
Practical Points in Wassermann Reaction. F. Green, Montreal.—p. 546.
Molasses Plate Method for Staining Many Paraffin Sections at One Time. A. S. Warthin, Ann Arbor, Mich.—p. 554.
New Hone for Microtome Knives. C. V. Weller, Ann Arbor, Mich.—p. 561.
Tables for Blood Chemistry Calculations. J. V. Falisi and V. A. Lawton, U. S. Army.—p. 566.
Device for Isolating Bacillus Acidophilus from Single Colonies. F. T Briedigam and T. M. Chang, Battle Creek, Mich.—p. 572.
Simple Microtome. G. W. Wagoner, Philadelphia.—p. 575.
Feeding Device for Use with Experimental Rat. H. T. Parsons and N. Alexander, Madison, Wis.—p. 576.
Small Sterilizing Box. E. Amberg, Detroit.—p. 580.

Chronic Typhoid Carrier State Among Vaccinated Convalescents.—Four chronic carriers of typhoid bacilli and one of paratyphoid B bacilli were found by Simmons and McCarthy among eighty-four convalescents, all of whom had received triple typhoid vaccine previous to their infections. Typhoid agglutinins were present in the serum of all the carriers and the titers for the positive typhoid carriers were 1:640, 1:1,280, 1:320 and 1:640, respectively. The serum of the paratyphoid B carrier agglutinated typhoid and paratyphoid B bacilli only in the 1:40 dilutions. Leukopenia, which has also been suggested as of diagnostic value for determining carriers, was not present in these cases. On the other hand, leukopenia occurred in five of the subjects who were not proved to be carriers.

Sodium Nitrite: Effect on Blood Pressure: Urinary Response.—An investigation was undertaken by Mason to determine (1) whether sodium nitrite altered the urinary output sufficiently and frequently enough to warrant the withdrawal of nitrites during a water test; and (2) whether the urinary response paralleled the blood pressure response. Observations on patients showed that urinary response to the administration of sodium nitrite does not parallel either the altered pulse pressure or the systolic blood pressure response. However, it is suggested that diastolic pressure is probably the most important in maintaining a constant blood pressure to the functioning glomerulus. Sodium nitrite can alter urinary excretion in only two ways: (1) by peripheral dilatation in the kidney, and (2) by lowering renal blood pressure. The first favors increased urinary secretion through increased blood volume flow through the kidney. The second decreases urinary secretion by maintaining a renal blood pressure below the optimal. Renal function depends on the blood volume flow through the kidney and pressure within the renal circulation. If nitrites promote blood volume flow through the kidney without too markedly decreasing the pressure, there will be diuresis. If the pressure in the renal circulation is markedly lowered, the water output will be decreased. The ingestion of 1,500 c.c. of water in one-half hour will usually cause an increase in blood pressure until diuresis is established, after which the blood pressure will return to its original level, or may drop to from 10 to 12 mm. below. Sodium nitrite given in 1 grain doses each one-half hour for three doses was sufficient in all cases, except two, to cause a definite blood pressure lowering.

Flocculation Test for Syphilis.—As a result of his investigation, McGlumphy is convinced that flocculation occurs when syphilitic serum is mixed with alcoholic extract of human heart muscle which has been previously extracted with ether. Negative serum shows no flocculation when mixed with such an alcoholic extract. The addition of 0.05 c.c. of glycerin to the mixture of alcoholic extract and serum increases the size of the floccules when the test is positive, and therefore renders the reading easier.

Effect of Thyroidectomy on Blood Serum Calcium.—In 114 consecutive thyroidectomies reviewed by Rabinowitch there were two cases of tetany. In both cases the symptoms were relieved with calcium salts and the patients ultimately recovered, requiring no further medication. The interesting observation was that no parathyroid tissue was found in the portion of thyroid removed in either case, and in both cases the calcium content of the blood serum was lowered. It appeared reasonable to Rabinowitch to assume that in each of these cases the tetany was not due to the removal, but to trauma of the parathyroid glands from manipulation or temporary interference with the blood supply.

Journal of Medical Research, Boston

44: 263-381 (March) 1924

Anaphylaxis in White Rat. J. T. Parker and F. Parker, Jr., New York.—p. 263.
*Lack of Identity Between Viruses of Herpes and Lethargic Encephalitis. F. Parker, Jr., Boston.—p. 289.
Cutaneous Hypersensitiveness to Tuberculin in Guinea-Pigs. L. B. Lange, Baltimore.—p. 293.
*Streptothrix Organism from Brain Abscess. A. E. Steele, Boston.—p. 305.
Effects Produced by Injection of Bacillus Histolyticus. T. D. Beckwith and G. MacKillop, Berkeley, Calif.—p. 311.
Quantitative Peculiarities of Mixtures of Virus and Immune Serum of Rocky Mountain Spotted Fever. C. L. Connor, Boston.—p. 317.
Rickettsia-Like Micro-Organisms in Insects. M. Hertig and S. B. Wolbach, Boston.—p. 329.
*Fatal Infection with Organism of Proteus Group. S. Warren and M. E. Lamb, Boston.—p. 375.

Virus of Herpes and Lethargic Encephalitis Not Identical.—Parker holds to the belief that if the virus of herpes and that of lethargic encephalitis are identical, these bodies should occur in the brains of human beings dying of lethargic encephalitis. He has carefully studied, histologically, the brains from seven cases of lethargic encephalitis in human beings, making many sections from each brain, and has failed to find any such bodies. The absence of these bodies in lethargic encephalitis would seem conclusive proof that the two viruses are not identical.

Streptothrix Found in Brain Abscess.—*Actinomyces asteroides*, otherwise known as nocardia or streptothrix, was found by Steele in sections of the brain of a man presenting symptoms of cerebral pressure; it was cultivated and the culture produced the lesions in animals. A trephine was made in the left temporal region and the dura opened. This was followed immediately by bulging of the brain substance into which a needle was inserted and pus evacuated from an abscess in the left temporal lobe. The abscess was drained and the wound partially closed. Further exploration was not deemed advisable because of the weak condition of the patient. He recovered from the operation, but signs of pressure continued; his general condition became worse and he died. The necropsy disclosed multiple abscesses of the brain. Coverglass preparations of the pus showed numerous masses of streptothrix.

Fatal Infection from Proteus Organism.—The patient, whose case is reported by Warren and Lamb, was suffering from myelogenous leukemia and tuberculosis, together with severe Vincent's angina. His resistance was lowered greatly. A gram-negative bacillus, unidentified, was obtained twice from a blood culture. It was closely allied to *Proteus vulgaris*, and was pathogenic for laboratory animals, causing septicemia and necrosis of the liver, heart and suprarenals. The filtrate of young broth cultures was toxic, and had pathologic effects on the tissues similar to those produced by the organisms. The lesions found in the spleen, liver and intestines are described.

Journal of Radiology, Omaha

5: 71-107 (March) 1924

Present Status of Intensive, High Voltage Radiation Therapy of Cancer. L. Herly, New York.—p. 71.
Dental Regional Roentgenography; Shadow Values in Relation to Normal Bone Construction. W. A. Lurie, New Orleans.—p. 77.
Urologic Aspect of Roentgenology. W. E. Achilles and A. M. Crance, Geneva, N. Y.—p. 81.
Roentgen Rays and Roentgen-Ray Apparatus. J. K. Robertson, Kingston, Canada.—p. 84.

Kansas Medical Society Journal, Topeka

24: 127-156 (May) 1924

Ocular Phenomena in Brain Tumor; Pituitary Tumors. W. G. Gillett, Wichita.—p. 127.
Pyelitis. H. E. McCarthy, Kansas City.—p. 130.
Sterility in Female. R. T. Frank, Denver, Colo.—p. 133.
Rabies. B. T. Crowley, Fredonia.—p. 136.
Mechanism of Cardiac Irregularities. H. N. Tihen, Wichita.—p. 138.

New Jersey Medical Society Journal, Orange

21: 147-178 (May) 1924

Insulin Treatment of Diabetes Mellitus; Report of Eleven Cases. A. E. Parsonnett, Newark.—p. 147.
Sinus Thrombosis. T. R. Chambers, Jersey City.—p. 151.
Functional Elements in Organic Nervous Diseases and Other Disorders. D. Nathan, Norristown, Pa.—p. 153.
Surgical Treatment of Sequels of Pneumonia. G. Blackburne, East Orange.—p. 155.

New Orleans Medical and Surgical Journal

76: 485-518 (May) 1924

Malformations. C. H. Mayo, Rochester, Minn.—p. 485.
Examining Nephritic Patient. H. A. Christian, Boston.—p. 487.
Story of Roentgen Ray. L. J. Williams, Baton Rouge, La.—p. 490.
Evaluation of Local Anesthesia. U. Maes, New Orleans.—p. 492.
*Luminal Sodium in Treatment of Hyperemesis Gravidarum. H. E. Miller, New Orleans.—p. 495.
Shadows in Aortic and Hilar Regions. A. Granger, New Orleans.—p. 498.
Treatment of Purulent Arthritis. I. Cohn, New Orleans.—p. 501.

Luminal Sodium in Treatment of Hyperemesis Gravidarum.—Miller uses luminal sodium in all cases in which the vomiting of pregnancy was not amenable to simple measures. Of ten patients treated, five were retaining possibly a third of the food ingested, but were losing strength and weight. The other five were undoubtedly instances of pernicious vomiting, and had the routine measures of proctoclysis, hypodermoclysis, glucose infusions, starvation treatment and glandular therapy, with little or no result. The same treatment was employed in all cases. Two grains of luminal sodium was given one hour before each meal, with the same dose at bedtime, all by mouth, except in three cases, in which the first doses were given hypodermically, and the patient was instructed to resume her ordinary diet. In one case, about three-quarters of the food taken during the first twenty-four hours was retained, after which there were no further attacks of vomiting; in every case the relief was immediate. The only untoward symptom following the administration of the drug was one case of urticaria. Several patients stated that they had wild dreams, but none complained of restless nights because of drowsiness during the day.

Northwest Medicine, Seattle

23: 203-254 (May) 1924

Diagnosis of Parasitic Diseases of Skin. O. S. Ormsby, Chicago.—p. 203.
Remote Effects of Brain Injuries. F. Brodie, Vancouver, B. C.—p. 207.
Clinical Aspects of Bronchial Asthma and Hay-Fever. P. Schonwald, Seattle.—p. 211.
Gallbladder Complications. J. R. Morrison, Bellingham, Wash.—p. 216.
Gonorrhea in 1924. G. W. King, Portland.—p. 219.

Oklahoma State Medical Association Journal, Muskogee

17: 106-130 (May) 1924

Fracture of Skull. F. S. Watson, Okmulgee.—p. 106.
Pseudo-Ileus or Pseudo-Intestinal Obstruction. H. L. Farris, Tulsa.—p. 108.
Acute Pancreatitis. L. H. Carleton, Tulsa.—p. 110.
Suppurative Appendicitis. E. B. Dunlap, Lawton.—p. 112.

Radiology, St. Paul

2: 287-366 (May) 1924

Sacralized Transverse Process. S. Moore, St. Louis.—p. 287.
Chronic Ulcerative Colitis. A. H. Logan, Rochester, Minn.—p. 302.
Diagnostic Line for Determining Subluxation of Fifth Lumbar Vertebra. H. J. Ullmann, Santa Barbara, Calif.—p. 305.
Spondylitis: Submerged Entity in Diagnosis of Obscure Conditions in Abdomen. W. H. Wallace, Brooklyn.—p. 307.
Measurement of Intensifying Factors of Roentgen-Ray Intensifying Screens. R. B. Wilsey.—p. 311.
Case of Lymphosarcoma of Stomach. D. B. Harding, Rochester, Minn.—p. 315.
Case of Appendiceal Abscess with Concretions Around Pin. C. G. Sutherland, Rochester, Minn.—p. 316.
Roentgen Ray as Remedy in Fibromyomata and Other Benign Gynecologic Diseases. M. E. Hanks, Chicago.—p. 317.
Shift Measurements on Stereoscopic Plates: Means of Correcting False or Doubtful Visual Impressions. F. B. Stephenson, Denver.—p. 326.
Ionometer for Relative Measurement of Primary Roentgen Rays. A. Mutscheller, New York.—p. 330.
History of Radium. K. S. Davis, Rochester, Minn.—p. 334

Southwestern Medicine, Phoenix, Ariz.

8: 107-156 (March) 1924

Angina Pectoris and Its Management. M. A. Mortensen, Battle Creek, Mich.—p. 107.
Roentgenologic Synopsis of Pulmonary Tuberculosis; Diagnosis of Cavitation. P. Ramos-Casellas, El Paso, Tex.—p. 114.
Peptic Ulcer from Surgical Standpoint. W. H. Woolston, Albuquerque, N. M.—p. 127.
Case of Bite by Spider (Latrodectus Mactans). W. L. Brown, El Paso, Tex.—p. 131.

8: 201-252 (May) 1924

Relation of Physician to Patient and Community. C. A. Thomas, Tucson.—p. 201.
Subacute Bacterial Endocarditis. F. A. Fillius, Rochester, Minn.—p. 203.
Diagnosis of Foreign Body in Lung; Case Reports. H. L. Baum, Denver.—p. 205.
Determining What Teeth Should Be Extracted. T. L. Gilmer, Chicago.—p. 212.
Heliotherapy in Surgical Diseases. O. S. Brown, Winslow, Ariz.—p. 215.
Psychoneuroses and Endocrine Dysfunction. S. D. Swope, El Paso, Tex.—p. 219.
Leopold Auenbrugger. E. A. Duncan, El Paso, Tex.—p. 222.
René Theophile Hyacinthe Laennec. H. W. Crouse, El Paso Tex.—p. 224.
Atypical Adenocarcinoma of Hypophysis; Case Report. Schuster and Schuster, El Paso, Tex.—p. 227.

Tennessee State Medical Association Journal, Nashville

16: 417-452 (April) 1924

Septic Thrombophlebitis of Portal Vein. J. W. Barksdale, Jackson, Miss.—p. 417.

Wisconsin Medical Journal, Milwaukee

22: 557-628 (May) 1924

*Present Status of Diabetic Patient as Surgical Risk. R. M. Wilder and S. F. Adams, Rochester, Minn.—p. 557.
Insulin Treatment of Postoperative Nondiabetic Acidosis and Toxemia Vomiting of Pregnancy. W. Thalhimer, Milwaukee.—p. 561.
Practical Application of Insulin. F. D. Murphy and R. Blumenthal, Milwaukee.—p. 565.
Medical and Hospital Cooperation. W. A. Henke, La Crosse.—p. 571.
Diurnal Variations of Sugar Utilization in Insulin Treatment of Diabetes. W. E. Nicely and C. C. Edmondson, Waukesha.—p. 575.
*Method of Blood Transfusion. G. F. Dick, Chicago.—p. 579.
Diagnosis and Treatment of Chronic or Latent Tonsillitis. J. Daland, Philadelphia.—p. 580.

Diabetic Patient as Surgical Risk.—Wilder and Adams stress the fact that the formerly prohibitive mortality which accompanied attempts at surgery on diabetic patients has been materially reduced by skilful surgery, proper anesthesia and the judicious use of medical measures before and after operation. It is unjustifiable to subject a diabetic patient to surgery unless very good surgery and special medical supervision are available. Insulin is a valuable adjunct in the management, but is only one of several important medical measures, and will not protect a patient unless it is skilfully administered. An operation may provoke severe acidosis in cases of very mild diabetes, and such cases deserve, therefore, the same scrupulous medical attention as do those of severe diabetes. Three hundred and twenty-seven operations are reported on 251 diabetic patients with four deaths. This gross mortality of 1.2 per cent. by operation compares favorably with that of the general surgical list. One hundred and forty-one of the operations were major surgical procedures.

Blood Transfusion.—The method described by Dick was devised for use in medical cases, and especially for patients too ill to be moved to the operating room. It consists in keeping a needle in the vein of the donor and one in the vein of the recipient, constantly—merely changing the barrels of the syringes, so that when the first blood withdrawn has been injected into the recipient, the second syringeful is ready to be injected. As the second syringeful is injected a third is being withdrawn. The procedure is continued until the desired amount of blood has been transferred.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Journal of Surgery, Bristol

11: 605-816 (April) 1924

Teale's Amputation. D'A. Power.—p. 605.
*Injuries to Kidney and Ureter. H. Bailey.—p. 609.
Intramedullary Capillary Angeioma of Shaft of Humerus, Leading to Spontaneous Fracture, Treated by Local Resection and Bone Grafting. H. Ballance.—p. 622.
Extensive Multilocular Cystic Epithelial Tumor of Jaw. C. A. Moore, G. Hadfield and L. E. Claremont.—p. 629.
*Intractable Pain Relative to Rhizotomy and Spinal Section. R. C. Shaw.—p. 648.
*Vermiform Appendix in First Thirty Hours of Acute Appendicitis. L. S. Dudgeon and P. H. Mitchiner.—p. 676.
Drainage in Acute Appendicitis. R. S. L. Brockman.—p. 690.
*Blood Changes Associated with Metastatic Tumors of Bone. A. Piney. —p. 707.
Cystic Pneumatosis of Intestinal Tract. C. A. R. Nitch.—p. 714.
Osteogenesis Imperfecta. R. L. Knaggs.—p. 737.
Treatment of Simple Papilloma of Bladder by Fulguration. W. G. Ball. —p. 760.
Pin in Appendix. J. H. Mather.—p. 772.
Volvulus of Stomach. H. Nockolds.—p. 774.
Case of Carcinoma of Breast: Death Thirteen and One-Half Years After Operation from Diffuse Secondary Deposits. C. P. G. Wakeley. —p. 775.
*Intussusception of Sigmoid Three and One-Half Years After Intussusception of Appendix. A. J. Blaxland.—p. 777.
Acute Intussusception in Femoral Hernial Sac. C. P. G. Wakeley.—p. 779.
Carcinoma of Solitary Kidney with Other Complications. M. B. Hannay and R. F. Young.—p. 780.

Treatment of Injured Kidney.—Bailey analyzes 108 cases of injured kidney in which the injury is mainly, if not entirely, confined to the kidney. In all the cases the rupture was extraperitoneal. Eighty-six cases were treated expectantly and twenty-six by operation. Nephrectomy was performed twenty-one times; partial nephrectomy once; suture twice; tamponade once; drainage of infected perirenal hematoma once. The only death was due to chloroform poisoning.

Clinical Effects of Rhizotomy.—Shaw concludes that the posterior roots are actively concerned in the conduction of stimuli in the majority of cases. The recurrence of pain, whether early or late, without evidence of psychical disturbance in many cases, suggests that another conducting channel may exist. The effects of rhizotomy on somatic sensibility were investigated by Shaw, and his results are cited. Rabbits were the animals used in these experiments.

Pathology of Acutely Inflamed Appendix.—Twenty-seven cases were examined by Dudgeon and Mitchiner, but in two instances, although the symptoms led to the clinical diagnosis of acute appendicitis, the viscus was found to be normal on examination in the laboratory. Ten control cases of chronic recurring appendicitis were also made use of. The chief aerobic organisms isolated from the interior of the appendix were *Bacillus coli* and streptococci. These organisms, with one exception (streptococcus), were nonhemolytic. Twenty-five acute cases were investigated. *B. welchii*, was present in four of these acute cases, but the organism failed to reveal its pathogenicity, and in one normal appendix. *B. coli* was not obtained by blood culture, and streptococci were found in only one case. All cases recovered without complications. *B. coli* infection of the urinary tract was present in three cases. Intestinal parasites were found in one of the acute cases, and in only one of the ten control cases of quiescent appendicitis (*oxyuris*). Appendix concretions consisted of fats, soaps and vegetable matter. Fats were demonstrated in the lumen, in the mucous lining, in the gland cells, in the lymph nodes of the appendix wall and in the lymph glands draining the appendix in the quiescent cases. These findings suggest fat absorption from the lumen. Evidence of chronic appendicitis was demonstrated in the wall of the appendix in some of the acute cases, although no previous history of appendicitis was obtained. In the chronic cases, and in the acute cases, when evidence of previous inflammation existed in the appendix wall, the fibrosis involved the muscular coat, which was extensively disorganized. Spirochetes were found in two cases.

Blood Changes in Metastasis of Bone Tumors.—A specific type of blood picture is described by Piney, which depends on the irritation of the marrow by secondary deposits of tumors or granulomas. The characters of the blood picture are roughly divided into two main classes, namely, those of the pseudopernicious and those of the pseudoleukemic type. The stained erythrocytes, in three cases cited, showed poikilocytosis, anisocytosis and polychromatophilia. The characters of the blood picture somewhat resemble those of pernicious anemia, but the occasional occurrence of a low color index is of great assistance in diagnosis. The blood picture in metastatic carcinoma corresponds to a late embryonic type of hematopoiesis, while in pernicious anemia the process may be said to revert to the early embryonic type. The differential diagnosis of metastatic carcinoma from pernicious anemia should present no difficulties if these criteria are borne in mind; but the differentiation from leukemia may be difficult. A valuable differential point is the invariable absence of a marked increase of basophil leukocytes in metastatic anemia, whereas this is almost invariably present in leukemia, and the presence of even a few basophil myelocytes may be regarded as very strong evidence of the leukemic nature of the case. The hematogenous origin of marrow metastases is reaffirmed.

Intussusception of Sigmoid Follows Intussusception of Appendix.—Three and one-half years after an intussusception of the appendix, Blaxland's patient had an intussusception of the sigmoid. The appendix had been completely inverted, its mucous surface being studied with malignant papillomatous growth, and it was lying within the transverse colon, having drawn up the ascending colon, the cecum and part of the ileum with it. The intussusception was reduced with the exception of the appendix which was removed by incising the cecum round its base. Three and one-half years later, the patient came with an intestinal obstruction. Laparotomy revealed an intussusception of the pelvic colon. The bowel was invaginated for 6 inches, and after reduction, which was performed without great difficulty, the cause of the intussusception was found to be a protuberant malignant ulcer, about 1 inch in diameter, situated in the wall of the upper part of the pelvic colon. The growth on section proved to be a malignant papilloma, similar in character, microscopically to that which had affected the appendix.

Indian Medical Gazette, Calcutta

59: 169-220 (April) 1924

Outbreak of Epidemic Dropsy Form of Beriberi in Calcutta. J. W. D. Megaw and S. P. Bhattacharjee.—p. 169.
Syphilis Complicating Mental Disease. O. A. R. Berkeley-Hill and Prakash Chandra Das.—p. 174.
*Formol-Gel (Aldehyd) Test in Diagnosis of Kala-Azar. F. F. Elwes, V. K. N. Menon and P. S. Ramakrishnan.—p. 175.
*Standard Treatment for Malaria. H. W. Acton and R. Knowles.—p. 177.
Etiology of Skin Diseases in Tropics. G. Panja.—p. 184.
*Poisonous Wheat. A. Swarup.—p. 186.
Litholapaxy; Its Limitations. A. J. V. Betts.—p. 187.
Case of Local Tetanus. J. Pereira.—p. 192.
Case of Paratyphoid B. Infection. W. W. Jeudwine.—p. 193.
Case of Anaphylaxis. N. N. De.—p. 193.
Syphilitic Granulomata of Uterus and Appendages in Child of Eight F. R. Parakh.—p. 194.

Formol-Gel Test for Kala-Azar.—Out of a total of eighty-one proved cases of kala-azar, 23.4 per cent. gave a completely negative formol-gel test, while 12.3 per cent. of proved cases gave a doubtful positive formol-gel test. Therefore, in 35.7 per cent. of this series of proved kala-azar cases the formol-gel test was of little or no value. There is a certain group of cases clinically kala-azar and which reacted to treatment with potassium antimony tartrate in which the formol-gel test was positive, but Leishman-Donovan bodies could not be found, although some of these patients had liver puncture performed no less than three times. It remains doubtful whether these cases were true kala-azar or some similar disease giving the formol-gel test and which reacted to potassium antimony tartrate. In 100 cases the Wassermann reaction was tested owing to its similarity to the aldehyd test. Only thirteen of the cases proved positive.

Quinin Acid Hydrobromid for Malaria.—Acton and Knowles advocate the intravenous injection of quinin acid hydrobromid for algid, comatose and cerebral malaria, or when the patient canot tolerate cinchona febrifuge or quinidin sulphate by the mouth. They consider that the dangers of intravenous injec-

tions of quinin have been greatly exaggerated. The dose usually given by them is from 7½ to 10 grains of quinin acid hydrobromid freshly dissolved in from 15 to 20 c.c. of sterile saline solution. In the majority of critical cases, one or two such intravenous doses of 7½ grains each, given during the first twenty-four hours, will speedily bring the patient into a condition of comfort, with a normal or subnormal temperature. The intravenous injections should then be discontinued and the patient should commence the full thirty-one day oral course of quinin. Intravenous quinin medication is useless in the prevention of relapses, and fails to sterilize the patient of parasites.

Poisonous Wheat.—Swarup reports eight cases of poisoning from eating wheat flour. A nursing baby that had not eaten any of this flour, although its mother had, also became ill. It is said that for this grain to become poisonous it is not necessary for it to be stored, but that it is poisonous when plucked.

Indian Medical Record, Calcutta

43: 97-128 (April) 1924

Use of Massage in Nervous Affections. J. W. Courtney.—p. 97.
Active Anaphylaxis. A. T. Roy.—p. 100.
Age Incidence of Kala-Azar Patients. S. C. Basu.—p. 107.
Care of Mother. N. N. Dey.—p. 109.
Pineal Gland and Thymus. S. K. Mukherji.—p. 109.

Medical Journal of Australia, Sydney

1: 327-354 (April 5) 1924

Diffuse Scleroderma: Two Cases. A. H. A. Court.—p. 329.
Edward VI. C. MacLaurin.—p. 331.
Living Suture in Tendon Transplantation. N. D. Royle.—p. 333.
Direct Smears. H. O. Lethbridge.—p. 334.
Adenoma Sebaceum. G. R. Hamilton.—p. 337.
Complete Heart Block. E. W. Fairfax and W. N. Horsfall.—p. 337.
Secondary Anemia Probably Due to Congenital Syphilis. H. B. Graham.—p. 339.

SUPPLEMENT

Differential Surgical Treatment of Prolapse of Uterus. F. Meyer.—p. 177.
Toxemias of Pregnancy; Analysis of 158 Cases of Eclampsia. J. C. Windeyer.—p. 179.
Maintenance of Lactation. M. H. Harper.—p. 186.
Establishment of Breast Feeding. F. T. King.—p. 188.
Establishment and Maintenance of Breast Feeding. H. M. Mayo.—p. 189.
Id. V. Scantlebury.—p. 190.
Treatment of Uterine Tumors. R. Worrall.—p. 191.
Radiotherapy of Uterine Tumors. L. J. Clendinnen.—p. 194.
Treatment of Gonorrhea in Women. H. H. Schlink.—p. 197.
Management of Breech Presentation. C. Duguid.—p. 203.
Fibroid Tumors Complicating Pregnancy. E. R. White.—p. 204.
Apparent Synergic Action Between Ergot and Strychnin. J. L. Jona.—p. 206.

1: 355-380 (April 12) 1924

*Tuberculous Invalid Pensioners in Australia. M. J. Holmes and F. R. Kerr.—p. 355.
Two Sea-Faring Doctors of Past: Lionel Wafer and Thomas Dover. R. S. Skirving.—p. 358.
Posterior Scleral Puncture in Acute Glaucoma. E. T. Smith.—p. 365.

SUPPLEMENT

Wassermann Reaction. M. Ross and A. H. Tebbutt.—p. 209.
Effect of Variations in Fixability of Complement on Wassermann Reaction. C. H. Shearman.—p. 212.
Cancer. J. B. Cleland.—p. 216.
Incidence and Mortality of Pneumonia at Royal Prince Alfred Hospital. M. Ross and A. H. Tebbutt.—p. 221.
Complement Fixation Test for Tuberculosis and Dreyer's Antigen. C. Badham.—p. 226.
Complement Fixation Test in Tuberculosis. L. M. Bryce and F. E. Williams.—p. 228.

Analysis of Histories of Tuberculous Invalid Pensioners.—The information contained in 419 applications for invalid pensions on account of tuberculosis has been compiled by Holmes and Kerr. Cough was the first symptom in 314 persons. Then in order of frequency were: loss of weight, 23 per cent., debility, lassitude and weakness, 23 per cent., hemoptysis, 10 per cent., dyspnea, 19 per cent., pleurisy and pains in the chest, 18 per cent., night sweats, 12 per cent., and loss of appetite, 7 per cent. Of the 419 pensioners, 208 had received sanatorium treatment, the majority of these for a period exceeding three months. Others had received treatment in general hospitals, either as inpatients or outpatients, or both; still others had received treatment from private doctors. Twenty-six persons had not received treatment. The results of the sanatorium and hospital routine and treatment were manifested in evident care afterward taken by the majority of the pensioners with regard to infective discharges —74 per cent. were taking adequate precautions for the collection and disinfection or destruction of sputum, according to methods learned in sanatorium or hospital. More than 90 per cent. of the pensioners slept alone and usually either out of doors or in a room by themselves and this even under the worst conditions of overcrowding. Only 132 persons gave a history of definite known exposure to infection. The exposure was at home in fifty-eight instances, at work in forty-five and among friends in twenty-nine. Tuberculous disease or death from tuberculosis was noted as having previously occurred in the house in only twenty-nine instances of the 417 houses in regard to which records were kept.

Quarterly Journal of Medicine, Oxford

17: 215-318 (April) 1924

Variations in Gastric Secretion of Normal Person. J. R. Bell and W. MacAdam.—p. 215.
*Arterial Elasticity in Man. J. C. Bramwell.—p. 225.
*Calcium and Phosphorus Metabolism. III. Absorption and Fixation in Skeleton. S. V. Telfer.—p. 245.
*Renal Glycosuria. F. G. Finley and I. M. Rabinowitch.—p. 260.
*Association of Blue Sclerotics with Brittle Bones and Progressive Deafness. W. Stobie.—p. 274.
*Inorganic Phosphorus Content of Cerebrospinal Fluid. H. Cohen.—p. 289.
*Proteins in Serum in Cancer. E. L. Kennaway.—p. 302.
Clinical Blood Coagulometer. O. S. Gibbs.—p. 312.

Measuring Arterial Elasticity.—An instrument is described by Bramwell by means of which pulsations on the surface of the body can be recorded with a string galvanometer. Preliminary observations showed that the hot wire sphygmograph, on account of its mechanical properties, was capable of recording the time of arrival of the pulse wave at different points of the body with a high degree of accuracy. It appeared, therefore, to be extremely suitable for investigating the velocity of transmission of the pulse wave. A method of determining the pulse wave velocity in short pieces of excised artery is described. The influence of blood pressure on arterial elasticity is discussed. A method is described by means of which it is possible to determine in living man the actual elasticity of the arteries in the limbs at all "effective pressures" between zero and diastolic.

Calcium and Phosphorus Metabolism.—The chief conclusion drawn by Telfer from his experiments is that the retention of the two bone forming elements in young animals, and consequently skeletal development, can be influenced by the amounts of calcium and phosphorus in the diet. In growing dogs, osteoporosis and rickets-like changes in the bones were produced on a diet containing a deficiency of calcium but an adequate amount of phosphorus. On addition of calcium lactate alone to this diet, with consequent readjustment of the mineral balance, the skeleton of the dogs developed normally. The factors concerned in the normal absorption of calcium and phosphorus are discussed. From considerations of the distribution of the two elements in the excreta, and the data obtained from metabolic experiments, the following conclusions are drawn: (*a*) The absorption of calcium is initially dependent on the free acid of the gastric juice, which plays an important part in effecting the solution of calcium salts in the diet. (*b*) Absorption is normally restricted by the alkaline reaction of the intestinal secretions which tend to neutralize and so cause precipitation of the lime in solution as insoluble phosphate. (*c*) The free absorption of calcium may be limited chiefly to a comparatively small portion of the upper part of the intestinal tract while still in acid solution. To ensure adequate absorption an excess of calcium in the diet considerably greater than requirements is necessary. (*d*) The absorption of phosphorus occurs freely even under pathologic conditions, and is difficult to restrict except by the addition of a large excess of calcium to a diet relatively poor in phosphorus. The fixation of phosphorus in the skeleton is dependent on that of calcium, and in a diet unbalanced with regard to the mineral elements the absorption of an excess of phosphorus is followed by its excretion in the urine. A rôle which the fats in the diet may play in facilitating the absorption of calcium and phophorus is suggested.

Renal Glycuresis.—Finley and Rabinowitch report six cases in which observations were made as to blood sugar time

curves, renal function, effect of diet, gaseous metabolism and glycuresis. They suggest the term renal glycuresis instead of renal glycosuria as being the more appropriate.

Association of Blue Sclerotics with Brittle Bones and Deafness.—The family reported on by Stobie consists of sixty-six persons belonging to five generations. Twenty-five members of the family, normal and affected, have been seen, questioned and examined. Eighteen members of the family, eight males and ten females, are affected. The tint of blue in the sclerotics has varied from a deep porcelain blue tint to the barely demonstrable blue of the infant, which is abnormal in a child or adult. One member, not seen, was described as having eyes nearly black. In no case have brittle bones or deafness, been found in the absence of blue sclerotics. The blueness of the sclerotics has not shown any relation to the grade of severity of the other symptoms. Blue sclerotics without evidence of fracture occurred in ten instances. Blue sclerotics with fractures occurred in eight cases. Blue sclerotics with deafness occurred in only four instances. Except for two instances of color blindness (dichromatic) no other failing or illness was discovered.

Inorganic Phosphorus Content of Cerebrospinal Fluid.—The inorganic phosphorus content of more than 150 cerebrospinal fluids was investigated by Cohen. It was normal at from 1.25 to 2 mg. per hundred cubic centimeters. In meningitis—tuberculous, acute syphilitic and meningococcal—a definite increase occurs. This is of diagnostic importance. In chronic nervous disease the cerebrospinal fluid shows a very slightly higher average content than normal—0.18 mg. per hundred cubic centimeters. There is no evidence that lipoid breakdown affects the phosphate content of the cerebrospinal fluid during life; after death it appears to be a factor of great importance. Evidence is brought forward to show that the increase found in meningitis is due to increased permeability of the cells of the choroid plexus (possibly other cerebral vessels); it is probable also that this factor accounts for the slightly higher average in chronic nervous disease.

Proteins in Serum in Cancer.—The possibility of detecting an increase in the proportion of globulin in cases of cancer sufficiently early for the method to be of diagnostic value, and the range of variation in the proportion of globulin which is found in normal and other noncancerous states were investigated by Kennaway in 104 cases. Some advanced cases of cancer showed an increase in the globulin of the serum, greater than any found in other conditions. There was at the same time a diminution, probably of a compensatory nature, in the serum albumin; the net effect was an increase in the total protein. It seems probable to Kennaway that the additional amount of globulin comes from the tumor; the clinical course of these cases shows that it has no appreciable immunizing action. This increase in globulin is very seldom perceptible sufficiently early to be of use in diagnosis. Other cases of cancer, apparently equally advanced, showed no increase in the globulin. A method is described for the estimation of serum proteins.

Archives Franco-Belges de Chirurgie, Brussels

27: 97-192 (Feb.) 1924

*Reconstruction of Hip Joint. Dupuy de Frenelle.—p. 97.
*The Kondoleon Operation for Elephantiasic Edema. E. Kondoleon.—p. 104.
Tuberculous Process in Pubis. G. Peeremans.—p. 111.
Operation for Fracture of Both Radius and Ulna. Courty.—p. 135.
Traumatic Fusion of Radius and Ulna. M. Le Jemtel.—p. 141.

New Ligaments for the Hip Joint.—De Frenelle protests against the blind methods in vogue for correcting congenital dislocation and other anomalies of the hip joint. He advocates Sherman's method of opening the capsule and severing impeding tissues. But he supplements this with new artificial ligaments. This restores approximately normal conditions in the hip joint, and renders immobilization unnecessary. The new round ligament is made by boring a passage from the neck through the head of the femur and through the acetabulum above. The ends of the artificial tendon (from calf or reindeer) are drawn through this tunneled passage, and are tied together. This holds the head firmly in place, while not hampering the movements of the joint. The ischiocapsular ligament is reconstructed in the same way, with two artificial tendons passed through holes bored in the iliac spine and the greater trochanter. The article is illustrated.

Ultimate Results of the Kondoleon Operation for Elephantiasic Edema.—Kondoleon's method of extensive excision of aponeurosis in treatment of chronic lymphatic edema was described in THE JOURNAL, Sept. 7, 1918, p. 800. He has performed the operation in twenty cases, in the last twelve years, and others have reported a number. A complete cure was realized only in the few cases without sclerosis and when the edema was not of long standing. The ultimate outcome on the whole is not as good as was anticipated from the great improvement at first but, even if the cure is not always complete, enough benefit is realized, he says, to amply justify the procedure in this intractable chronic malady.

Archives de l'Institut Pasteur de Tunis

13: 1-154 (April) 1924

Melitin Test for Malta Fever in Goats. E. Burnet.—p. 1.
*Mammitis in Goat Carriers of Idem. Burnet and Anderson.—p. 7.
Snails and Bilharziasis in Tunis. M. Langeron.—p. 19.
Madura Foot in Tunis. G. Anderson.—p. 68.
Tests of Adulteration of Coagulated Milk. J. Bance.—p. 71.
*Bacteria in Hot Springs. Caillon and Catouillard.—p. 98.
Improved Technic for Treatment of Rabies. P. Remlinger.—p. 114.
Cestodes of Cats in Tunis. S. Mazza.—p. 120.
Prophylaxis of Bilharziasis. C. Anderson and E. Gobert.—p. 125.
Pigmented Xeroderma in Tunis. H. Jamin.—p. 129.

Goat Carriers of Micrococcus Melitensis.—Burnet and Anderson say that no tests are constantly positive in goats with melitensis infection. The general health may not be affected, but mammitis is constant, and seems to be the essential feature of Malta fever infection in goats.

Thermophil Bacteria.—Caillon and Catouillard review what has been published on this subject, and report the various species they were able to cultivate from some Tunis hot springs. One bacillus found in all seemed to be of the subtilis species; its spores bore heating to boiling point without harm.

Bulletin de l'Académie de Médecine, Paris

91: 493-520 (April 22) 1924

*Varicella and Herpes Zoster. A. Netter.—p. 494.
Pseudocysts in the Pancreas. Brin and Denéchau.—p. 509.
Hypergenitalism Predisposes to Tuberculosis. Jacquemin.—p. 517.

Affinity Between Chickenpox and Herpes Zoster.—Netter has compiled sixty-nine cases of zona for which varicella seemed to be responsible, or vice versa, mostly published in other countries. He now tabulates seventy-two additional cases, all in France. The same virus seems able to induce varicella or herpes zoster at will, changing arbitrarily at brief intervals. Complement fixation tests show a crossed affinity of the antigens, resembling that between smallpox and vaccinia.

Bulletin Médical, Paris

38: 489-516 (May 3) 1924

*The Complications in Tuberculosis. A. Jacquemin.—p. 495.
Posttraumatic Chronic Mental Distress, With or Without Hallucinations. R. Benon.—p. 496.

Complications of Pulmonary Tuberculosis.—Jacquemin discusses the helpful derivative action realized when a tuberculous bone process develops in the course of pulmonary tuberculosis. He warns explicitly that the secondary process in bone or elsewhere must be left unmolested; it serves the useful purpose of a derivation and a fixation abscess. But if the pulmonary process is secondary to the bone lesion, the indications and prognosis are exactly the reverse: The bone or joint lesion had better be extirpated, hoping that the secondary lung lesion may subside thereafter. The cases he reports confirm the benefit from these "subtracting complications" of pulmonary tuberculosis, the list including adenitis, arthritis, orchiepididymitis, etc.

Presse Médicale, Paris

32: 409-420 (May 10) 1924

*The Recurrent Branch of Spinal Nerves. R. Leriche.—p. 409.
Indications for Insulin in Diabetes. H. Chabanier et al.—p. 409.
Gastrojejunostomy After Gastrectomy. V. Pauchet.—p. 412.
Diathermy Plus Radiotherapy in Infantile Paralysis. H. Bordier.—p. 414.
*Operative Technic in Pyosalpingitis. M. Roussiel.—p. 416.

Clinical Importance of the Recurrent Branch of the Spinal Nerves.—Leriche believes that the physiology of these nerves explains certain pathologic phenomena. He recalls that Luschka's nerve, the small recurrent or meningeal nerve, originates near each spinal ganglion, consists of spinal and sympathetic filaments, enters the spine through the intervertebral foramen, divides into ascending and descending branches which join other similar branches, and give origin to ramifications going to the vessels of the meninges and spine. Luschka's nerve is the sensory nerve of the meninges and spine, and the vasomotor nerve of the vessels of the spinal cord and spinal roots. In cases of radicotomy for relief of pain in amputation stumps, he found the region of the terminal cone and lumbar roots on the side of the amputation covered with abnormally numerous and dilated ramifying arterioles and venules. The posterior roots suffer from compression by these dilated vessels. His physiologic explanation is that the cicatricial neuroma of large nerves in a stump, acting on adjacent nerve terminals, induces sympathetic reflexes which are reflected to the periphery by way of the spinal ganglions. The reflex excitation from the ganglion may pass by the mixed nerve or by Luschka's nerve to the stump. If it takes the latter route, it disturbs the vasomotor innervation of corresponding parts of the spine, meninges and roots. This may entail vasodilatation which may invade the opposite side, and the pain will then be diffuse, without clear localization. He believes that reflex excitation from any cause, after passing through the spinal ganglion, may take the same route. This may induce remote pain in the spine or diffuse radicular disturbances, such as traumatic ascending neuritis. This is not actual neuritis, and it may cause diffuse pains, often spreading to the other side. The same explanation may be given, he says, for remote pains in the spine in pelvic, abdominal, genital or gastro-intestinal affections.

Operative Technic in Pyosalpingitis with Adhesions.—Roussiel detaches the mesentery of the sigmoid flexure and of the cecum, and severs the round and iliolumbar ligaments for access to the adherent tumor. He emphasizes the advantage of this technic not only in cases of adhesions with the pelvis and ureter, but with adhesions between the rectum, sigmoid flexure and cecum. He gives an illustration of his method.

32: 429-440 (May 17) 1924

*Cerebrospinal Fluid in Charcot's Disease. Guillain and Marquézy.—p. 429.
*Fever Late in Syphilis. M. Bloch.—p. 432.
Treatment of Lumbar Puncture Accidents. R. Danis.—p. 434.
Curettage in Postpartum Puerperal Infection. Bonnecaze.—p. 434.
Nontuberculous Hemoptysis. R. Laufer and G. Vitry.—p. 436.
The American Research on the Toxic Effects of Local Anesthetics. L. Cheinisse.—p. 436.

Colloidal Reactions of Cerebrospinal Fluid in Charcot's Disease.—Guillain and Marquézy say that examination of the cerebrospinal fluid is of great diagnostic value in multiple sclerosis (Charcot's disease). They emphasize the specific changes which occur in the fluid in the beginning of the disease when the symptomatologic diagnosis is often very difficult. These changes are the absence of or insignificant hyperleukocytosis and hyperalbuminosis, negative globulin and Wassermann reactions, and a subpositive or positive benzoin reaction.

Fever Late in Possibly Unrecognized Syphilis.—Bloch calls attention to cases of persistent fever, with absence of physical signs, which are often labeled tuberculosis or malaria but for which old syphilitic infection is responsible. He says that in a case of indefinitely prolonged fever of pseudomalarial type, when an infectious process is not manifest, and the examination of sputum, blood, urine, and the serologic tests, hemocultures and radiography are negative, syphilis has to be considered.

Progrès Médical, Paris

269-292 (May 3) 1924

*Ascites and Glycosuria. Loeper and Turpin.—p. 269.
*Disappearance of Chlorosis. R. J. Weissenbach.—p. 270.
Cerebrospinal Fluid in Syphilitic Meningitis. W. Schulmann and E. Terris.—p. 273.
Treatment of Laryngitis and Croup. P. Lereboullet.—p. 277.
Treatment of Metrorrhagia. R. Marsan.—p. 281.
Bacteria as War Weapon. G. Espé de Metz.—p. 282.
Treatment of Varicose Veins. G. Coudray.—p. 286.

Ascites and Glycosuria.—Loeper and Turpin were unable to induce alimentary glycosuria in patients with voluminous ascites from cirrhosis of the liver. After ingestion of sugar, the sugar content of the ascites rose and continued high, sometimes even when the blood sugar had begun to decline. The ascites sugar level remained high for days.

Disappearance of Chlorosis.—Weissenbach finds that only the severer type of chlorosis is disappearing. This is probably due to better food and general hygienic conditions. Mild forms characterized by a hemoglobin index between 0.70 and 0.85 are frequent. The murmurs heard over the jugular veins are not pathognomonic, but aid the diagnosis.

305-316 (May 17) 1924

*Action of Atropin on Gastric Secretion. Loeper and Marchal.—p. 305.
Occupational Tetrachlorethane Poisoning. Feil and R. H. de Balsac.—p. 306.
Inferior Segment of Uterus in Delivery. Jeannin.—p. 307.
Eye Disturbances Caused by Teeth. C. Fromaget.—p. 309.

Action of Atropin on Leukopedesis and Secretion of Hydrochloric Acid.—Loeper and Marchal administered by the mouth and by injections, after a test meal of 125 c.c. of peptone water, 0.25 mg. of atropin sulphate to human subjects, and 1 mg. to the test animals. Leukopedesis which was weak in the beginning, increased notably after six hours, always twofold, but sometimes to 9,160 leukocytes in 1 c.mm. of stomach content. The increase is more pronounced in hypochlorhydria than in hyperchlorhydria. As leukopedesis increases, the secretion of hydrochloric acid decreases, and the diminution of free and combined acid prevents increase of leukocytes. The authors explain that atropin, which is an inhibitor of vagus function, diminishes acidity and acts on leukopedesis. Besides, in case of inhibited vagus function, the action of the sympathetic nerve becomes predominant, which agrees with the reports of Claude and Santenoise. The efficiency of atropin in ulcer of the stomach may be explained by assuming that leukopedesis is as useful in the healing and protection of the ulcer as hyposecretion in suppression of spasms and pains. Atropin, given by the mouth, produces a temporary but stronger and more rapid effect than by injections.

Revue de Chirurgie, Paris

62: 219-282, 1924

*Inhalations of Pure Oxygen in Surgery. G. Panis.—p. 219.
Intermittent Dropsy of the Gallbladder. T. Astériadès.—p. 231.
Case of Tuberculous Osteitis of the Scapula. R. Monod.—p. 264.
*Fractures of the Sella Turcica. C. Vergoz.—p. 272.

Inhalation of Oxygen in Surgery.—Panis explains that dyspnea, cyanosis and chilling after an operation are best combated by inhalation of pure oxygen. He describes four cases in which the losses of blood seemed to have been responsible for the postoperative decline in vitality; in two other cases the disturbances were evidently from operative shock. In all six the benefit from profuse inhalation of oxygen was pronounced. He warns that the oxygen must be given freely, through a mask, to obtain the desired result. The oxygen was kept up for one or two hours or was given intermittently for twenty minutes at a time, as an adjuvant to the usual measures.

Fracture of the Sella Turcica.—In Vergoz' seven cases the patients were in coma when first seen, and there was nothing to indicate that the trauma had involved the pituitary region, the dura being intact. In eighty-five cases of fracture of the base of the skull he has compiled, the sella turcica was fractured in thirty-one.

Schweizerische medizinische Wochenschrift, Basel

54: 429-448 (May 8) 1924

*Senile and Myopic Eyeball. A. Vogt.—p. 429.
*Ascarids as Cause of Disease. G. Fanconi.—p. 434.
Improvements in Roentgen-Ray Treatment. Steiger.—p. 438. Conc'n.

Senile and Myopic Eyeball.—Vogt draws a parallel between degenerations of myopic and of senile eyes. He believes that both conditions are hereditary.

Ascarids as Cause of Disease.—Fanconi reports the history of a child, aged 17 months, with meningeal symptoms and severe vomiting and diarrhea. About 450 ascarids left the bowel at this time. The child had had urticaria and cough

six weeks before the onset of the diarrhea. It is possible that this was due to migration of the larvae through the liver and lungs.

54: 449-472 (May 15) 1924

*Significance of Psychanalysis. H. Christoffel.—p. 449.
*Action of Potassium Iodid on Circulation. D. Bloom.—p. 455.
Acute Aortitis. L. Oetiker.—p. 459. Cont'd.
Origin of Amniotic Fluid. O. Häuptli.—p. 463.
Treatment of Hay-Fever. L. von Gordon.—p. 463.
"Psychanalysis and Schizophrenia." M. Tramer.—p. 466.

Significance of Psychanalysis for Psychiatry.—Christoffel attributes the lack of understanding of psychanalysis among certain physicians partly to emotional causes (the shock to our self-complacency), partly to mental laziness. In grave psychic diseases the method may be valuable, especially in diagnosis and explanation of schizophrenic symptoms. Beginning paranoia or manic and depressive states may be favorably influenced by it.

Action of Potassium Iodid on the Circulation.—Bloom found a decrease in systolic pressure and increase in volume and frequency of the pulse in the majority of the patients being treated with potassium iodid. Small doses (1 gm. daily) were sufficient.

Pediatria, Naples

32: 505-568 (May 1) 1924

*Rickets and Hereditary Syphilis. O. Cozzolino.—p. 505.
Measles Micro-Organism in Stillborn Infant. P. Ritossa.—p. 513.
Clinic for Infants. A. Luzzatto.—p. 523.
*Cerebrospinal Meningitis. L. Auricchio.—p. 553.
Diphtheria of the Vulva. B. Vasile.—p. 557.

Rickets and Hereditary Syphilis.—Cozzolino found among 2,500 rachitic children only four presenting a clinical picture which corresponded to Marfan's description of syphilitic rickets. Syphilis can scarcely be considered as a cause of rickets, as the latter responds to diet and light without regard to the Wassermann reaction.

Cerebrospinal Meningitis.—Auricchio observed Froin's syndrome in the lumbar puncture fluid of an infant with epidemic meningitis. The syndrome consists in xanthochromia and massive coagulation of the fluid. The fluid obtained from the cerebral ventricles had only the properties typical of meningocccus meningitis.

32: 569-632 (May 15) 1924

*Familial Megacolon. A. Dalla Valle.—p. 569.
Meningitis from Pfeiffer's Bacillus in an Infant. Gerbasi.—p. 600.
*Iron in Blood of the New-Born. C. Gallo.—p. 606.
Achondroplasia. A. Ronchi.—p. 611.

Familial Megacolon.—Dalla Valle publishes a case of megacolon with necropsy findings in the brother of a similar patient whose history he had reported previously.

Iron in Blood of the New-Born.—Gallo found between 0.034 and 0.055 per cent. of iron in the blood of the new-born. The average figures were lower than in adults. There was no direct proportion between the amount of hemoglobin and of iron.

Policlinico, Rome

31: 543-574 (April 28) 1924

*Agglutinating Serum for Typhoid. A. Caserto.—p. 543.
Torsion of Spermatic Cord. G. Nicolich, Jr.—p. 545.
Aspiration from Serous Cavities. A. de Martini.—p. 547.
Blood of the Tuberculous at High Altitudes. T. and J. Stephani.—p. 549.
"Heredity in Cardiovascular Diseases." G. Galli.—p. 550.

Agglutinating Serum for Typhoid.—Caserto kills typhoid bacilli by drying them at a temperature of 37 or 38 C. and then heating an emulsion of these bacilli at 55 C. for half an hour. Rabbits showed no disturbances after intravenous injections of 12 billions of these germs. The production of agglutinins was rapid, and the titer very high.

31: 575-606 (May 5) 1924

Retracting and Fibrous Mesenteritis. V. Jura.—p. 575.
*Cure of Nephritis by Pneumonia. F. Giugni.—p. 581.
Gymnastics in Orthostatic Albuminuria. A. Gismondi.—p. 584.
*Preventive Vaccination in Scarlet Fever. A. Piattelli.—p. 586.
Determination of Blood Urea. G. Egidi.—p. 587.

Cure of Nephritis by Pneumonia.—Giugni had been treating a young man with a hydropigenous type of nephritis and high blood pressure. The function of the kidney improved materially with the onset of lobar pneumonia, which ended favorably with a crisis. Within a few days all the signs of nephritis, including the hypertension, disappeared. He believes that the pneumonia acted like a protein shock.

Preventive Vaccination in Scarlet Fever.—Piattelli used Caronia's vaccine in fifty-nine children during an epidemic of scarlet fever. None of the vaccinated contracted the disease.

31: 607-638 (May 12) 1924

*Exudates and Transudates. A. Borgherini-Scarabellin, Jr.—p. 607.
Sacralization of Lumbar Vertebrae. E. Sciaky.—p. 610.
Proteins in Cerebrospinal Fluid. F. Alzona.—p. 613.

Exudates and Transudates.—Borgherini-Scarabellin considers Rivalta's test as preferable to others: A few drops of the fluid produce a smoky turbidity when falling in 100 c.c. of water acidified by a few drops of glacial acetic acid. Martiri's test, based on titration with phenolphthalein, gives quantitative results. Sochansky's method is only a modification of the latter.

31: 245-292 (May 1) 1924. Medical Section

*Biologic Tests for Syphilis in Malaria. A. Businco and P. Foltz.—p. 245.
*Monocytosis in Malaria. I. Meo-Colombo.—p. 255.
Malaria Between Epidemics. R. Viviani and G. Martinelli.—p. 268.
*Epidemic Dysphagia. E. Vampré.—p. 279.

Biologic Tests in Syphilis and Malaria.—Businco and Foltz applied the various serologic tests to the serum from fifty persons with different forms of malaria. The response was weakly positive in four cases, and syphilis was probable in these. In over 78 per cent. of the others the reactions were constantly negative; in 8.6 per cent. there was autofixation, and in 11.8 per cent. slight inhibition and hemolysis, evidently aspecific fixations. Pure chronic malaria was constantly negative. Association with syphilis always gave clear and decided positive reactions.

Monocytosis in Malaria.—The Roman school has always ascribed a certain importance to monocytosis in the diagnosis of malaria. Meo-Colombo always found pronounced monocytosis by the fourth day in the adult cases examined. In children there was no monocytosis, but their physiologic lymphocytosis was exaggerated.

Epidemic Intermittent Dysphagia.—Vampré relates that the *mal de engasgo* has been explained by the roentgen rays as an intermittent spasm of the cardia and adjacent esophagus. It is probably of parasitic origin, and the only effectual treatment seems to be the slitting of the muscular ring of the cardia, leaving the mucosa intact.

31: 233-288 (May 15) 1924. Surgical Section

*Death from Burns. R. Brancati.—p. 233.
Biliary Cysts of Liver in Children. I. Scalone.—p. 260.
Tuberculous Spondylitis. G. Egidi.—p. 275.

Death from Burns.—Brancati believes that death in cases of burns is due to an anaphylactic shock from the proteins changed by the heat.

Archivos Latino-Amer. de Pediatría, Buenos Aires

18: 129-192 (March) 1924

*Determination of Malnutrition. Garrahan and Bettinotti.—p. 129.
Case of Disturbances from Cervical Rib. J. A. Praderi.—p. 138.
*Enteromesenteric Cysts of Embryonal Origin in Children. Prudencio de Pena.—p. 144.
*Habitual Vomiting in Breast-Fed Infants. R. Berro.—p. 168.

Methods of Determining Malnutrition in Children.—Garrahan and Bettinotti compared the findings with the various methods applied to 2040 school children at Buenos Aires. Their conclusion is that the use of the Wood tables seems fully as instructive and reliable as any of the more complicated methods for detecting the undernourished.

Mesenteric Cysts in Children.—De Pena describes four cases of large enteromesenteric cysts of embryonal origin. All required resection of the bowel, and one child of 2 recovered after the operation. In this case the diagnosis had been tuberculous peritonitis at first and later, congenital hydronephrosis. The cyst was on the lower ileum and, after evacuation of a liter of fluid, the cyst was sutured to the abdominal incision, rinsed with ether and drained, with smooth recovery.

Habitual Vomiting in Nurslings.—Berro does not attempt to decide whether the extreme nervousness, which is the rule

in these children, is secondary to the vomiting or is the cause. But it is sometimes possible to avert the vomiting by giving the child the breast in a dark, quiet room. A single hasty movement or loud voice may bring on the vomiting, while it may be escaped by absolute quiet. If the child does not lose in weight, drastic measures are not needed. In three of his cases the child was evidently not getting enough milk, and the vomiting ceased when mixed feeding was started.

Brazil-Medico, Rio de Janeiro

1: 229-244 (April 26) 1924

*Treatment of Squint. G. de Andrade.—p. 229.
*Transmissibility of Leprosy. Belmiro Valverde.—p. 233.
Emergency Surgery: Traumatic Lesions. P. P. Paes de Carvalho.—p. 236.
French Works on Cardiovascular Disease in 1923. E. Donzelot.—p. 238.

Strabismus.—De Andrade expatiates on the superior advantages of combining tenotomy with advancement of the muscle at the same operation, for pronounced strabismus.

Transmissibility of Leprosy.—Valverde calls attention to a case of leprosy acquired at Paris from a leper father. This disproves the theory of mosquito transmission, as the mosquitoes incriminated are not found at Paris.

Revista Médica del Uruguay, Montevideo

27: 65-96 (March) 1924

Pseudoleukemic Splenic Anemia. W. Piaggio Garzón.—p. 65.
*Protracted Pneumococcus Meningitis. E. Portu Pereyra.—p. 70.
Ileus from Chronic Appendicitis. A. Rodriguez Castro.—p. 76.

Protracted Pneumococcus Meningitis.—The meningitis had followed otitis in the two little girls, and it proved fatal in a month notwithstanding antiserum treatment. Polymorphonuclears formed 94 to 99 per cent. of the elements in the spinal fluid in the first case, but in the second case, lymphocytes formed 75 per cent. at first, but at the third puncture the polymorphonuclears had reached 98 per cent.

Siglo Médico, Madrid

73: 361-384 (April 12) 1924

*Integral Therapeutics. A. Pulido.—p. 361.
*Early Diagnosis of Tabes. G. R. Lafora.—p. 362.
Present Status of Lithotrity. A. Mut y Gil.—p. 366.
Sleeping Sickness Endemic in Spanish Island Colony. P. Huerta.—p. 367.
Local Treatment of Cancer. P. Peña Novo.—p. 371.
Hydrotherapy. Márquez y Rodriguez.—p. 372.
When is Abortion Indicated? Ignacio Fedriani.—p. 374.

Integral Therapeutics.—Pulido remarks that the experience accumulated in years of practice should be regarded as a capital to be invested, as in public utilities, for the welfare of the community. He draws on his own fifty years of practice and nearly forty consecutive years in parliament to sustain his plea for integral therapeutics, publishing some letters which he wrote to certain patients as part of their course of treatment, diverting and guiding their minds into new channels.

Early Diagnosis of Tabes.—Lafora comments on some instructive cases which show that precious time is wasted, in incipient tabes, on treatment of supposed "rheumatic pains" instead of recognizing the tabetic nature of the pains or paresthesias in the feet or in the stomach. The Wassermann test may be negative in the spinal fluid and even in the blood, while the knee-jerk may be intact. Tracing the history back in a case of tabes we can see that, years before, certain warning symptoms might have given the alarm if they had been heeded, but the physicians wait before diagnosing tabes until a triad of unmistakable symptoms develop, and then the favorable stage for treatment is past. This is particularly liable to occur in case of tabes in a medical man. The tabes process begins usually in one nerve root, and this sets up one or more symptoms. The knee-jerk may even be exaggerated for a time.

Archiv für klinische Chirurgie, Berlin

129: 435-656 (May 10) 1924

No Bone Production from Connective Tissue. C. Rohde.—p. 435.
Operative Treatment of Rachitic Curvature. E. Büsch.—p. 470.
Chronic Colitic Changes. C. Schroeder.—p. 479.
Callus in Endosteum. E. Bergmann.—p. 490.
*Reduction of Size of Stomach. W. Dreifuss.—p. 495.
Progressive Cystic Chylangioma. W. Sudhoff.—p. 515.
*Metatarsal Bone Disease. H. Koch.—p. 535.
*Complication of Anesthesia by the Rectum. E. von Zalka.—p. 547.
Development of the Tuberosity of the Tibia. E. Fels.—p. 552.
*Splenectomy in Essential Thrombopenia. D. Engel.—p. 563.
Resection of Stomach by Billroth I. A. Schüppel.—p. 589.
Experimental Research on Influence of Suprarenals and Testes on Tendency to Convulsions. C. H. Lasch.—p. 601.
Anemic Infarct in Bone After Fracture. Gastreich.—p. 616.
Biologic Analysis of Inflammatory Process. Idem.—p. 621.
Defects of Gastroscopes Hitherto in Use. W. Sternberg.—p. 629.
Pirquet and Wildbolz Tests in Surgical Tuberculosis. Landau.—p. 636.
*Blood Grouping as Guide in Skin Grafting. A. Kubányi.—p. 644.
*Reduction of Dislocated Shoulder. J. Malis.—p. 648.
Case of Fracture of the Penis. Idem.—p. 651.
*"Bloodless Splenectomy." F. O. Hess.—p. 654.
"Healing of Wounds After Sympathectomy." E. Liek.—p. 656.

Operation to Correct Chronically Enlarged Stomach.—The principle of this operation is like that of gastroplicatio, suturing folds in the stomach wall to reduce the size of the organ. The thick folds thus taken up protrude inside and hamper the functioning of the stomach. This is avoided by Rehn's technic which cuts out the thick part of the stomach wall, leaving only the mucosa to form the fold to protrude into the lumen. He excises one or two crescents or oval pieces on the anterior aspect of the stomach, cutting down only to the submucosa, leaving the mucosa intact. The gap in the serosa and musculature is then sutured. The results were excellent in the two clinical cases in which the operation has been applied to date. It can be used to supplement various operations on the stomach.

The Deutschländer Metatarsus Disease.—Koch explains this well defined affection as the insidious outcome of some inflammatory process or trauma of the shaft of a metatarsal bone. In a case described, the fifth metatarsal bone was split, the anomaly occurring in the unusually delicate bone under the influence of occupational long standing.

Complication of Intrarectal Anesthesia.—Zalka ascribes the torsion of the mesentery of the small intestine in the case described to the rectal administration of the ether.

Splenectomy for Essential Thrombopenia.—Engel gives summaries of nineteen cases he has found on record in which the spleen was removed as a last resort on account of secondary anemia from years of hemorrhages into the skin and mucosa. The tendency to hemorrhage was arrested at once, sometimes even after mere ligation of the splenic artery, and the improvement has persisted, becoming even more pronounced with time. In one acute case with the operation the second day of the acute hemorrhagic purpura, the girl of 16 died in a few hours with no signs of benefit. This same adverse course was noted in two other acute cases in Engel's own experience, while the benefit was pronounced in one other acute and in his chronic case. In one of his fatal acute cases, extensive foci of necrosis of the bone marrow were found in a vertebra, the only bone available for examination. This affection of the bone marrow was probably the source of the intense thrombopenia in the young man which proved fatal the fourth day notwithstanding the splenectomy. Engel remarks that the etiology of acute hemorrhagic purpura evidently differs from that of the chronic cases; only in the latter alone can splenectomy be counted on to relieve.

Lemaire and Debaisieux have recently reported equally prompt recovery in a case of essential thrombocytopenia after mere ligation of the splenic artery. Their communication in the *Bulletin* of the Belgian Academy of Medicine, March 29, 1924, p. 149, states that the hemorrhagic purpura had developed abruptly in the boy of 15 in the midst of apparent health, with severe hemorrhages, the thrombocytes 2,500. The anemia was so extreme in a month that splenectomy seemed out of the question, and the splenic artery was ligated where it passed along the upper margin of the pancreas, near the third pancreatic branch. The thrombocytes numbered 32,000 in two days and there were no further hemorrhages. The blood platelets had increased by the ninth day to 76,000 and by the sixteenth to 238,000.

Blood Grouping Tests Before Skin Grafts.—Kubányi's experimental and clinical experience has demonstrated that homoplastic transplants "take" better when infant or embryonal tissues are used, and also when the blood of the donor and recipient show iso-agglutination.

Reduction of Dislocation of the Shoulder.—Malis ties a towel around the table top and the chest of the horizontally

reclining patient to hold the trunk firm. Then he draws the humerus up vertically with his right hand while with his left thumb on the head of the humerus in the axillary fossa he manipulates the head into its proper place. If an assistant draws up the humerus, then both hands can be used in manipulating the head into place.

"Bloodless Splenectomy."—Hess comments on a recent article which recommended subcutaneous injection of epinephrin preliminary to splenectomy, saying that his and others' experimental research has demonstrated that the superposed depressing action on the heart of the anesthetic and the epinephrin makes a dangerous combination.

Deutsche medizinische Wochenschrift, Leipzig

50: 593-624 (May 9) 1924

Homosexuality. F. Kehrer.—p. 593.
*Auto-Implantation of Endometrium. A. Lauche.—p. 595.
Blood Sugar in Cancer. H. Biermer.—p. 597.
*Blood Transfusion and Anaphylaxis. A. Böttner.—p. 599.
*Gage of Resorption of Effusions. H. Deist.—p. 600.
Treatment of Dysmenorrhea. T. Brandess.—p. 601.
*Breast Nursing in Puerperal Affections. Runge and Lauer.—p. 602.
*Idiopathic Digestive Insufficiency. A. Mader.—p. 604.
Palpation with Direct Visual Inspection in Exploration of the Duodenum. W. Sternberg.—p. 605.
*Mushroom Poisoning from Breast Milk. Buttenwieser and Bodenheimer.—p. 607.
Hynotism. E. Kindberg.—p. 608.
Sedimentation Test and Differential Count. G. Volk.—p. 610.
*Corneal Herpes from Ovarian Disturbance. A. Niedermeyer.—p. 611.
Jaundice After Transfusion of Blood. W. Bayer.—p. 612.
*Alcoholism and Tuberculosis. I. W. Samson.—p. 613.
Experiences of a Ship's Medical Officer. A. Weilbauer.—p. 615.

Auto-Implantation of Endometrium.—Lauche reviews his own findings and the German literature on heterotopic proliferation of epithelial cells in the peritoneal cavity of women. He finds only confirmations of Sampson's theory of the origin of hyperplastic epithelium, resembling the uterine mucosa. Sampson explains it by auto-implantation of particles of uterine mucosa during menstruation. Hemorrhages may occur in these tumors during the following menstruations.

Anaphylaxis in Blood Transfusions.—Böttner observed several instances of shock from a second transfusion of compatible blood in pernicious anemia patients. He believes that the time of the harmful transfusion—from three to six weeks after the first—as well as the eosinophilia which occurred, indicate phenomena of anaphylaxis.

Chlorid Metabolism as Gage of Resorption of Effusions.—Deist found an increased elimination of chlorids during resorption of pleural effusions. A salt-free diet is indicated.

Breast Nursing in Puerperal Affections.—Runge and Lauer continue breast nursing in puerperal affections. The quantity of milk decreases and mixed feeding has to be used in addition. Only in puerperal sepsis is breast nursing suspended. Tuberculosis of the mother forms a strict contraindication for nursing.

Idiopathic Digestive Insufficiency.—Mader emphasizes the nervous stigmata in children suffering from the so-called idiopathic insufficiency of digestion (Herter's disease). The patients do not increase and may lose in weight; diarrhea is common. There is hyperacidity of the stomach contents and, as a rule, eosinophilia. Proteins are preferable during diarrheas, but a mixed diet helps sometimes. Calcium has proved beneficial.

Poison of Amanita in Breast Milk.—Buttenwieser and Bodenheimer observed toxic symptoms in a 17 days old baby, nursed by his mother who had been poisoned by mushrooms (*Amanita phalloides*). Experiments on guinea-pigs made the transmission of the poison by the milk seem very probable.

Corneal Herpes from Ovarian Disturbance.—Niedermeyer reports the history of a patient with a corneal herpes recurring with menstruation. Vision was already impaired when he began treatment with injections of ovarian preparations. The patient recovered.

Alcoholism and Tuberculosis.—Samson has been collecting statistics in regard to alcoholism and incidence of tuberculosis in the prostitutes of Berlin. His figures confirm those of Koelsch who found less tuberculosis in alcohol addicts than in normal subjects. Orth concluded from the necropsies of 218 hard drinkers that they are less endangered by tuberculosis than the nonalcoholic. He emphasizes that the temperance movement is not discredited by these findings, but that this movement has to be sustained by arguments which can stand scientific criticism.

50: 625-664 (May 16) 1924

*Streptococci in the Blood. R. Freund and E. Berger.—p. 625.
Infectious Endocarditis. Isaac-Krieger and Friedlaender.—p. 627.
*Fat and Urobilin in Stools in Tuberculosis. H. Friedrich.—p. 632.
*Mucous Colitis. S. Went.—p. 632.
*Picrotoxin Hyperglycemia and Insulin. V. M. Kogan.—p. 634.
Typical Ganglion on Finger. Sonntag.—p. 635.
*Artificial Relaxation of Muscles in Fractures. E. Moser.—p. 637.
Danger of Feeding to Fatten Babies. L. Langstein.—p. 638.
*Enuresis. P. Karger.—p. 639.
Normal Amboceptor for Sheep's Blood and the Wassermann Test. P. Schwarz.—p. 641.
*Percussion by Machine. A. Pohl.—p. 643.
Quantitative Determination of Albumin. P. Levi-Crailsheim and W. Kiel.—p. 644.
Scar Murmurs in Healed Tuberculosis. Stroux.—p. 644.
Artificial Respiration in the New-Born. H. Baumm.—p. 645.
Bismuth Treatment of Gonorrhea. F. Landt.—p. 646.
Recent Progress in Orthopedics. Debrunner.—p. 646.
The Meat Supply Question. Foth.—p. 648.
The Work of German Colonial Physicians. Steudel.—p. 649.
Budget of Public Health and Education Department. O. Strauss.—p. 651.
Physicians and Social Insurance. S. Alexander.—p. 652.
Psychology of Anthroposophy. Vorwahl.—p. 653.

Streptococci in the Blood.—Freund and Berger had very good results with the following culture method: They set aside from 5 to 10 c.c. of the patient's blood to clot. The serum is poured off completely and the remaining blood clot is incubated in 50 c.c. of bouillon containing 10 per cent. of horse serum. A few drops of this fluid are inoculated daily on blood-agar plates.

Fat and Urobilin in Stools in Tuberculosis.—Friedrich in eight necropsies confirmed Ehrmann's and Wolff's observations on the fatty degeneration of the liver in tuberculous patients with fatty stools. The amount of urobilin in the feces of such patients is lowered. He believes that the fatty stools are due to an insufficient secretion of bile.

Mucous Colitis.—Went treats mucous colitis with three injections of autogenous colon bacilli.

Picrotoxin Hyperglycemia and Insulin.—Kogan found that insulin lowers or prevents, in rabbits, the hyperglycemia from picrotoxin.

Artificial Relaxation of Muscles in Fractures.—Moser emphasizes the advantages of his method of artificial relaxation of the muscles in cases of fractures and dislocations. An injection of procain into the extensors and flexors of the arm makes the reduction of dislocation of the elbow an easy task. These injections are also useful in the treatment of fractures, and shorten considerably the time necessary for the treatment by extension. The method was published in 1922 and was rediscovered by others in 1923.

Enuresis.—Karger points out the necessity for examining the child for organic disease. The enuresis begins sometimes after a rhinitis or any other disturbance of the nasal respiration. The pharynx gets dry when the child breathes through the mouth. Thirst and drinking follow, and the latter is continued as a habit. Almost every case of alleged diabetes insipidus in children is of this origin. Restriction of water intake cures the condition. A good method in enuresis consists in training the child to urinate in the day time at longer intervals. If they are as long as four hours, the enuresis stops as a rule. Disagreeable drugs and painful faradic current should be used only immediately after the enuresis, and not at other times and not as a punishment. This treatment develops a regular pedagogic conditional reflex in the child.

Percussion by Machine.—Pohl uses the differences in the pitch of the sound produced by a vibration massage apparatus for determination of the borders of organs. He had good results even when examining the abdomen.

Deutsche Zeitschrift für Chirurgie, Leipzig

185: 1-144 (April) 1924

*Suprarenal Virilism. A. Scabell.—p. 1.
*Osteochondritis. A. Lieschied and H. Sellheim.—p. 46.
*Acute Pancreatitis. R. Vogel.—p. 71.

Biologic Serodiagnosis of Tuberculosis. H. Friedrich.—p. 93.
*Fat Flap for Defect in Dura. T. Hünermann.—p. 107.
*Operative Treatment of Pericostal Tuberculosis. H. Ito.—p. 124.
*Gastroptosis and Gastropexy. E. Kutscha-Lissberg.—p. 129.
*Rupture of Kidney with Hydronephrosis. K. Reschke.—p. 137.

Suprarenal Virilism and Pseudohermaphrodism. — Scabell compares with two cases he describes twenty-three from the records in which pseudohermaphrodism was associated with hyperplasia of the suprarenals, and forty-seven cases of precocious puberty, or virilism with acquired suprarenal hyperplasia. Hypoplasia of the bone marrow was a frequent finding, and was conspicuous in his two personal cases. In the first, the girl had been normal to the age of 12 when virilism developed, with a suprarenal tumor which proved fatal in three years. In the other case hyperplasia of the suprarenals was associated with false female hermaphrodism. Scabell discusses suprarenal hypergenitalism in the congenital, acquired and rudimentary forms, with special regard to pathologic constitutions.

Osteochondritis and Endocrine Derangement. — Lieschied and Sellheim report the case of a young woman with multiple juvenile osteochondritis and ovarian insufficiency which had entailed a female eunuchoid growth. After ovary grafting, the osteochondritis improved remarkably, confirming its endocrine origin, and suggesting tentative organotherapy in every case of osteochondritis in the young.

Acute Pancreatitis.—In many of Vogel's fifty-five cases of acute pancreatitis the diagnosis had been erroneous. In nine cases perforation of a gastric ulcer had been assumed, and cholecystitis in sixteen. The previous disturbances that had suggested gastric ulcer had probably been slight attacks of pancreatitis that had retrogressed. In 42 per cent. of the total cases there were complications in the biliary passages. In two cases a contusion and in three a childbirth had preceded the pancreatitis. Nearly all the patients displayed a tendency to obesity. The ages ranged from 17 to 78. The mortality in the fifty-one operative cases averaged 59 per cent.; even in the favorable cases, the fistula was long in healing.

Fat Tissue for Repair of the Dura. — In the eight cases described, the adipose tissue to patch the gap in the dura was taken from the patient's thigh. Examination from twenty to 330 days afterward showed that the fat tissue was still soft and elastic, retaining its histologic characters.

Pericostal Tuberculosis.—Ito packs the dead space after the focus has been cleared out with a pedunculated muscle flap and then sutures without draining. He thinks this principle should be applied even to a cold abscess unless there is mixed infection.

Gastropexy. — Kutscha-Lissberg reports the complete cure in his five cases of severe stomach disturbances from gastroptosis, after gastro-enterostomy and fastening the stomach in place by Rovsing's technic. The ptosis had not been recognized as the cause of the disturbances, until operations on gallbladder and appendix had failed to relieve.

Rupture of Kidney in Hydronephrosis.—Reschke adds two more to the twenty-three cases on record of this eventuality. Eleven recovered of the seventeen with immediate nephrectomy, but 75 per cent. died of the nephrotomy cases.

Klinische Wochenschrift, Berlin

3: 817-864 (May 6) 1924

Stomach Motor Reflexes. P. Klee.—p. 817.
Slow and Acute Heart Failure. H. v. Hoesslin.—p. 819.
Protein Coagulation and Precipitation and Tissue Permeability. W. Heubner.—p. 824.
Metals as Secondary Source of Rays. A. Liechti.—p. 825.
Epileptic Symptoms and Brain Lesions. E. Feuchtwanger.—p. 828.
*Blood Platelets in Hemophilia. R. Feissly and A. Fried.—p. 831.
*Amino-Acids in Fever. J. Donath and R. Heilig.—p. 834.
*Serologic Unity of Colon Bacilli. Meyer and Löwenberg.—p. 836.
"Scurvy, Infectioa and Dysergia." Abels.—p. 838. Reply. Nassau.—p. 838.
Activation of Microbes by Extracts. Weichardt and Scholz.—p. 839.
*Blood Coagulation and Sedimentation. E. Wöhlisch.—p. 839.
Acute Atrophy of the Liver in Syphilis. H. Jacoby.—p. 840.
Perinephritic Suppurations. K. Scheele.—p. 841.
Psychology of Occultism. E. Straus.—p. 843.
Diabetes Insipidus and Infundibular Region. E. Frank.—p. 847.
Conc'n, p. 895.

Blood Platelets in Hemophilia.—Feissly and Fried saw no difference in the acceleration of coagulation in normal plasma on adding blood platelets from healthy or from hemophilic subjects. The latter acted less strongly only on a hemophilic plasma. They attribute the delayed coagulability in hemophilia to malfunction of the thrombin-forming part of the blood plasma.

Amino-Acids in Fever.—Donath and Heilig found an increase in the amino-acid nitrogen of the blood plasma (up to 61 per cent.) whenever an injection of proteins or sulphur had produced fever. No increase was observed during fever in malaria, tuberculosis and sepsis.

Serologic Unity of Colon Bacilli.—Meyer and Löwenberg consider the hemolytic strains of colon bacilli as practically one serologic group. The nonhemolytic require homologous immune serum, but this agglutinates, as a rule, many hemolytic strains.

Blood Coagulation and Sedimentation.—Wöhlisch applied strong pressure to precipitated fibrinogen. When redissolved, the protein coagulated on being diluted with from 1 to 2 per cent. sodium chlorid solution. He believes that the expression removed mechanically a stabilizing colloid and, therefore, agrees now with Herzfeld and Klinger's theory.

3: 865-912 (May 13) 1924

*Extrapyramidal Affections. A. Jakob.—p. 865.
*Vital Staining of Wounds. W. v. Gaza.—p. 870.
*Lipase of Serum and Liver. J. Broekmeyer.—p. 874.
Goats' Milk Anemia. B. de Rudder.—p. 876.
Surgery of Bronchial Asthma. F. W. Kaess.—p. 880.
Action of Dehydrocholalic Acid. E. Neubauer.—p. 883.
Inunction Treatment with Bismuth. F. W. Oelze.—p. 883.
"Physiology of Palpation." Hausmann.—p. 884. Reply. Goldscheider.—p. 884.
*Permeability and Sympathetic Innervation. L. Asher, I. Abelin and N. Scheinfinkel.—p. 885.
The Sympathetic and Muscle Tonus. S. Fujimori.—p. 885.
*Caloric Reaction of Labyrinth. S. Fujimori.—p. 885.
Ulcer of Stomach. L. v. Friedrich.—p. 886.
Diagnosis of Syphilis of Aorta. G. Hubert.—p. 886.
Medical Examination of Students. L. Loeffler.—p. 892.

Extrapyramidal Affections.—Jakob surveys the histopathology of chorea, Parkinson's disease, athetosis and similar conditions.

Vital Staining of Wounds.—Gaza injected colloidal metals and stains in granulation tissue. He saw all the stages between adventitia cells and free histocytes.

Lipase of Serum and Liver.—Broekmeyer found that the action of the normal lipolytic ferment of the serum is inhibited by small amounts of strychnin and especially by cocain. The drugs do not act on the lipase of the liver.

Permeability and Sympathetic Innervation.—Asher, Abelin and Scheinfinkel extirpated in cats one cervical sympathetic and produced salivation by injection of pilocarpin. Both submaxillary glands produced equal amounts of secretion, but the saliva from the operated side contained only one half as much chlorids as the other side.

Caloric Reaction of Labyrinth.—Fujimori's experiments on pigeons convinced him that the lymph stream in the semicircular canals does not cause the caloric reaction, and that even the canals themselves are not the only organs on which the caloric stimulus acts.

Medizinische Klinik, Berlin

20: 625-660 (May 11) 1924

*Diagnosis of Appendicitis. E. König.—p. 625.
*Aspect of Human Iris in Health and Disease. W. Gilbert.—p. 629. Conc'n.
*Pancreas Hormone and Utilization of Sugar. Robert Wertheimer.—p. 632.
Autochthonous Malaria in Child at Prague. J. Langer.—p. 636.
*Diagnosis of Stage of Pleurisy, R. Peyrer.—p. 637.
*Acute Purulent Perimeningitis. F. Keienburg.—p. 640.
*Convalescents' Serum in Chickenpox. W. Schmidt.—p. 642.
Poisoning with Oil of Chenopodium. Von Liebenstein.—p. 642.
*Lipoid Spots in Intima of the Aorta. M. Westenhöfer.—p. 643.
Fornet's Tuberculosis Reagent. P. Pitzen.—p. 645.
Indications for Roentgen Treatment. H. Fritsch.—p. 647.

Diagnosis of Appendicitis.—König found the diagnosis wrong in 18 per cent. of the patients sent to the clinic for an operation for acute appendicitis, and in 35 per cent. of the supposed chronic cases. Affections of the female sex

organs were the most frequent cause of error. Vaginal examination should precede appendectomy in women as well as rectal examination in men. The shifting of the pain from the epigastrium to the right hypogastrium is a very important sign of appendicitis. Bilateral pains speak for salpingitis. The two affections may be combined. The pain follows the whole extent of the colon in colitis. Pneumonia in children and typhoid are to be thought of as possibilities when there is high fever. Typhoid should be suspected when headaches are present. The face is flushed in pneumonia, and there may be herpes. There is no facies abdominalis in these patients. Spasms of the bowel and umbilical colics of nervous children, without increase in temperature, have caused many unnecessary operations. The pain in affections of the gallbladder stops after infiltration of the right tenth thoracic nerve. An idiopathic serous peritonitis—perhaps of influenzal origin—causes, in the young, acute diffuse abdominal pains, vomiting and other signs of perforative peritonitis. Hematuria does not exclude appendicitis. Surgical treatment is necessary whenever the diagnosis is certain or probable. It should be omitted in all other patients.

Aspect of Human Iris in Health and Disease.—Gilbert describes the appearance of the iris in healthy and sick subjects. He gives an amusing account of the "iriscopy" species of quacks, especially the Swedish pastor, Liljequist, and Felke.

Pancreas Hormone and Utilization of Sugar.—Wertheimer found marked differences between the sugar content of the arteries and of the veins in healthy subjects and animals, even during rest of the muscles. Such differences were not present in human diabetes nor in pancreatectomized dogs. The pancreatic hormone acts not only on the liver but also on other tissues (muscles), increasing glycogen formation and sugar destruction.

Diagnosis of Stage of Pleurisy.—Peyrer considers the daily measuring of the urine and especially a diuresis test as the best means to determine whether a pleuritic effusion is increasing or being resorbed.

Acute Purulent Perimeningitis.—Keienburg describes a case of acute purulent perimeningitis. There were all the meningeal symptoms except disturbance of consciousness. The cerebrospinal fluid was only slightly turbid, while the extradural space contained pus with staphylococci. The patient recovered after extradural and intradural injections of 3 c.c. of a 0.1 per cent. solution of acriflavin.

Convalescents' Serum in Chickenpox.—Schmidt was not able to prevent varicella by injections of 7.5 or 8 c.c. of convalescents' serum in the incubation period.

Lipoid Spots in Intima of the Aorta.—Westenhöfer considers the origin of patches of sclerosis as entirely different from that of lipoid degenerations. The former are localized in the aorta where it gives off the intercostal arteries, and are due to traction on the intima by the flowing blood stream. The lipoid patches correspond to the uneven parts of the spine, and are caused by the pressure of the intima against it.

Münchener medizinische Wochenschrift, Munich

71: 601-632 (May 9) 1924

Determination of Bismuth in Organs. Autenrieth and Meyer.—p. 601.
*The Cardiac Nerves and Asthma. E. K. Frey.—p. 603.
Suboccipital Puncture. M. Pfister.—p. 603.
Strap Technic for Hip-Joint Casts. H. Knorr.—p. 605.
*The Molars in Congenital Syphilis. H. Pflüger.—p. 605.
*Theory of Wassermann Reaction. R. Griesbach.—p. 607.
Spirochetes in Sections. W. Krantz.—p. 608.
*Skin Diphtheria in Infants. I. Reinhardt.—p. 610.
The Constitution Question. Lehmann.—p. 611.
*Moving Pictures of Heart. P. v. Zezschwitz.—p. 614.
Serotherapy of Diphtheria. K. Ochsenius.—p. 616.
Long Retention of Fetal Parts. L. Geisenhofer.—p. 616.
Case of Roentgen Injury. K. Stordeur.—p. 617.
*General Paralysis in Spite of Malaria. Schwartz.—p. 618.
Hydatid Cyst of Kidney. J. Koch.—p. 618.
"Subtrochanter Osteotomy." J. Hass.—p. 618.
Psychotherapy in Heart Affections. K. Grassmann.—p. 619.
Home for Recuperation of Children. W. Veith.—p. 623.

The Cardiac Nerves and Asthma.—Frey points out that severing of one pneumogastric or resection of sympathetic ganglions, as used in treatment of bronchial asthma, is dangerous if the heart is not perfect. Digitalis also acts less effectively on a denervated heart.

The Molars in Congenital Syphilis.—Pflüger observed a typical "bud" shape of the first molars in adolescents with congenital syphilis. A normal molar has its largest circumference at the level of the chewing surface and the smallest at the base. In congenital syphilis, the base is the broadest part.

Theory of Wassermann Reaction.—Griesbach injected dried alcoholic extracts from syphilitic livers in guinea-pigs. The serum of the animals gave a weak complement fixation with these extracts, but not with cholesterolized extracts from normal organs.

Skin Diphtheria in Infants.—Reinhardt's cases demonstrate the necessity to think of diphtheria in eczema or skin ulcers in infants.

Motion Pictures of Heart.—Zezschwitz reports the findings (including moving pictures) of a soldier with a shell splinter in the atrioventricular groove.

General Paralysis in Spite of Malaria.—Typical progressive paralysis developed in Schwartz's patient in the fifth year after malaria (ten attacks). The patient had syphilis fifteen years before the onset of the paralysis and had not been sufficiently treated.

Wiener klinische Wochenschrift, Vienna

37: 431-461 (May 1) 1924

Origin of Pulmonary Tuberculosis in Soldiers. P. Gerber.—p. 431.
Tuberculosis and Health Insurance. A. Götzl.—p. 433.
Exact Investigation of Tuberculosis. F. Hamburger.—p. 434.
Roentgentherapy in Bone and Joint Tuberculosis. J. Hass.—p. 435.
Sanatorium Economy. K. Holtei.—p. 436.
Mistakes in Diagnosis of Surgical Tuberculosis. M. Jerusalem.—p. 437.
Cachexia in Tuberculosis. A. Kirch.—p. 439.
Psychic Fever in Pulmonary Tuberculosis. E. Ladeck.—p. 439.
*Menstrual Reaction in Pulmonary Tuberculosis. H. Maendl.—p. 440.
*Diagnosis of Bronchus Carcinoma. W. Neumann.—p. 441.
The Diet in Tuberculosis Sanatoriums. H. Poindecker.—p. 442.
Treatment of Tuberculous Abscesses. S. Romich.—p. 444.
Pains in Pulmonary Tuberculosis. A. Schick.—p. 444.
The Treatment at the Grimmenstein Sanatorium. C. Siess.—p. 446.
Prophylaxis of Tuberculosis. E. Weidinger.—p. 450.
Diagnosis of Incipient Pulmonary Tuberculosis. W. Neumann. (Supplement).—pp. 1-8.

Menstrual Reaction in Pulmonary Tuberculosis.—Maendl says that auscultation during menstruation reveals in the apices of tuberculous women dry râles where in thorough examination at other times no signs of catarrh can be found. His investigations show that this phenomenon is not only of help in diagnosis, but is symptomatic of an active specific process in the lungs.

Physical Diagnosis of Cancer in the Lung.—Neumann reports that with a bronchus carcinoma in the upper lobe, percussion reveals, with a normal apex area, almost complete dulness in the median half of the infraclavicular fossa. The dulness extends to the third rib and to the farther side of the manubrium. Auscultation in the same region shows no bronchial breathing, amphoric sounds or râles, but reveals diminished or even absence of vesicular breathing. These physical findings are pathognomonic of cancer in the bronchus of the upper lobe, and make possible its early diagnosis.

37: 463-486 (May 8) 1924

Fever Type. H. Schur.—p. 463.
*Nursing by Syphilitic Mothers. M. Hesse.—p. 465.
*Epinephrin in Retention of Placenta. R. Joachimovits.—p. 470.
Vagus Pressure Experiment. D. Scherf.—p. 471.
Blood Transfusion. B. Breitner.—p. 471.
*Toxicity of Diphtheria Bacilli. K. Fukutaki.—p. 474.
Actinomycoses of Bones and Meninges. V. Ambrus.—p. 476.
Staining of Spirochetes. Dubosarsky.—p. 478.
The Regularity of Vital Processes. H. H. Meyer. (Supplement).—pp. 1-16.

Nursing by Syphilitic Mothers.—Hesse is very strongly opposed to breast nursing of apparently healthy children of syphilitic mothers. The own mother might transmit the syphilis, and a wetnurse might get infected from the baby if it should prove syphilitic.

Epinephrin in Retention of Placenta.—Joachimovits dilutes 1 c.c. of a 0.1 per cent. solution of epinephrin with 4 c.c. of sterile water and applies it on the hand before extracting

the placenta. The blood vessels of the uterus contract immediately, and the danger of infection is diminished.

Toxicity of Diphtheria Bacilli.—Fukutaki found that the toxicity of extracts from diphtheria bacilli is due to a soluble toxin, and that it can be neutralized by the antitoxin.

37: 487-510 (May 15) 1924

*Parietal Valve Pneumothorax. K. Nather.—p. 491.
Iodin and Gas Metabolism. P. Liebesny.—p. 494. Cont'd.
Malaria Treatment of General Paralysis. R. Untersteiner.—p. 499.
Psychologic Aspects of General Paralysis Treated with Malaria. P. Schilder.—p. 500.
*Bacteriophage Therapy. E. Zdansky.—p. 501.
Bacteriology of Leg Ulcer. W. Löwenfeld.—p. 502.
Norwegian Scabies. R. Gruss.—p. 504.
Phosphate Metabolism and Its Disturbances in Man. H. Elias. (Supplement.)—pp. 1-16.

Parietal Valve Pneumothorax.—Nather draws attention to the frequency of little tears in the pleura occurring during operation for substernal goiter or carcinoma of the esophagus. The tear may cause an inspiratory valve pneumothorax, and rapidly entail death if not recognized. He recommends the use of a trocar with valve arrangement which allows passage of air during expiration.

Bacteriophage Therapy.—Zdansky found that the fluid from the sewers contains bacteriophages against most bacilli. He incubated a few hundred cubic centimeters of this after addition of peptone and salt, and tested the filtrate. Eventually he incubated the sewer fluid with the strain for which he wanted to obtain the lysin.

Zentralblatt für Chirurgie, Leipzig

51: 823-886 (April 19) 1924

*Pruritus as Early Symptom of Malignant Disease. H. Küttner.—p. 824.
*Iodin in Surgical Tuberculosis. G. Hotz.—p. 826.
Tenotomy in Treatment of Scoliosis. F. Loeffler.—p. 828.
Operative Treatment for Shortened Leg. Abrashanow.—p. 832.
Vomiting as Complication of Gastro-Enterostomy. Metge.—p. 834.
Mechanism of Action of Periarterial Sympathectomy. Lehmann.—p. 838.
Abdomino-Anal Resection of High Rectal Cancer. Moszkowicz.—p. 840.

Diffuse Pruritus as Premonitory Symptom of Internal Cancer.—Küttner discusses the significance of pruritus as a premonitory symptom of malignant tumors. In two cases of gastric carcinoma, for several months before the cancer became manifest, the patients had complained of unbearable itching. When the pruritus was the worst, the first gastric symptoms of cancer were noted. The pruritus was generalized, but no changes in the skin were noticeable. The patients were well nourished, so that cachectic pruritus could not be suspected. In both cases the cancers were extremely malignant and inoperable. It is probable that other malignant tumors besides carcinomas produce itching in the same manner.

Iodin in Surgical Tuberculosis.—Hotz recommends the use of iodin in multiple tuberculosis of the bones, spondylitis with abscesses and fistulas, and severe cases of tuberculosis of the peritoneum with meteorism and mild manifestations of ileus. It is often combined with salt baths, sun baths, roentgen-ray treatment, and when feasible, with a sojourn in sunny, high plateau regions. He recommends intramuscular injection of only 1 to 4 c.c. of an iodin-iodoform solution, (90 parts of 10 per cent. iodoform-glycerin and 10 parts of 10 per cent. tincture of iodin), preceded by an injection of 2 per cent. procain to lessen the pain. In from two to four weeks the injection is repeated. Out of an average of 120 tuberculous patients yearly he loses only four or five by death. Of sixty-two patients with tuberculous peritonitis in six years, he lost four. At most, four or five resections and amputations are required yearly. The extirpation of isolated foci in bones and soft parts is, however, frequent, possibly forty cases every year. Caution must be exercised, as local and general treatment combined easily leads to overdosage. The pulse curve gives the warning.

Zentralblatt für Gynäkologie, Leipzig

48: 945-1008 (May 3) 1924

Chloroform in Treatment of Asphyxia of Child During Delivery. E. Frey.—p. 946.
Hemangioma of the Uterus. H. Hirschberg.—p. 957.
*Midpain and Ovarian Dysmenorrhea. C. H. Stratz.—p. 962.
Psychotherapy in Intractable Vomiting of Pregnancy. G. v. Wolff.—p. 964.
Inflammatory Tumors of Greater Omentum. E. Hinderfeld.—p. 967.
Differential Diagnosis of Pelvic Effusions and Pelvic Tumors. H. Jentter.—p. 970.

Midpains.—Stratz applies this term to the pains sometimes observed between the menstrual periods. It occurs as a pathologic exaggeration of the physiologic processes accompanying the ripening of the ovum. A distinction should be made between disturbances from ovulation and those from menstruation, as a guide in treatment.

Casopis lekaruv ceskych, Prague

63: 725-760 (May 10) 1924

*Isolation of Colloids from Urine. K. Teige and V. Podrouzek.—p. 725.
Transient and Suspicious Glycosurias. F. Vanýsek.—p. 726.
*The Glycemia Curve and the Hypothalamus. F. Vanýsek.—p. 731.
*Treatment of Surgical Tuberculosis. Zahradnický.—p. 733. Conc'n.
*Physiology of Carbon Dioxid Baths. M. Wassermann.—p. 741. Conc'n.
"Hemolytic Immune Serums." J. Kabelik.—p. 744. Reply. Kredba.—p. 745.

Isolation of Colloids from Urine.—Teige and Podrouzek isolated the colloids from urine by repeated shaking and collecting the foam. The product was dialyzed and found to be electronegative and resistant to heat and the action of salts. It contained a large quantity of urates, which is interesting with regard to Litchtwitz' theory of the protecting action of colloids against formation of sediments. The urates could be separated by shaking the aqueous solution with carbon disulphid.

The Glycemia Curve and the Hypothalamus.—Vanýsek observed a rise of the blood sugar after ingestion of sugar and a rapid return in one hour to the previous level in diabetes insipidus and juvenile general paralysis with nanosomia, but not in acromegaly. The salt metabolism may influence the glycemia curve.

Treatment of Surgical Tuberculosis.—Zahradnický concludes his study of 5,175 cases of surgical tuberculosis which were observed during twenty-five years. The recovery was complete in 57.7 per cent.; partial in 36.7 per cent., and 4 per cent. of the patients died. He combines both conservative and radical methods with general treatment, including heliotherapy.

Physiology of Carbon Dioxid Baths.—Wassermann concludes his extensive review of the literature and his own observations on the action of carbonated baths. He attributes the reddening of the skin to a direct absorption of carbon dioxid by the skin.

63: 761-796 (May 17) 1924

*The Disease of Smetana, the Composer. A. Heveroch.—p. 761.
*Estimation of Heart Function in Sports. Libenský.—p. 765.
*Blood Pressure After Ski Races. L. Filip.—p. 766.
Movements of the Esophagus in Phonation. M. Seemann.—p. 771.
Periarterial Sympathectomy. L. Hybner.—p. 776. Cont'd.
Cancer of the Esophagus. E. Kliment.—p. 780. Conc'n.

The Disease of Smetana, the Musician.—Heveroch publishes the clinical and necropsy findings on B. Smetana. The famous composer became deaf in 1874, when 50 years of age. At first the high notes sounded differently in the two ears; later he heard whistling. Afterward, dizziness set in, and at last he was able only to perceive but not to distinguish very high pitched tones. He continued to work, and wrote some of his best music while deaf, using the ominous four times accented E, which had announced his disease, in his quartette "From my Life." In 1881 his mental faculties became slightly affected. In 1882 transitory attacks of aphasia and alexia set in. In 1883 auditory and, later, visual hallucinations appeared and arteriosclerotic dementia developed. The master died in the insane asylum in 1884.

Estimation of Heart Function in Sports.—Libenský found that euphoria in an athlete cannot be considered sufficient evidence that his performance is innocuous for his future health.

Blood Pressure After Ski Races.—Filip determined the blood pressure in twenty-nine men participating in a ski race of 50 kilometers. There were no signs of dyspnea. The systolic blood pressure decreased in all cases, the diastolic pressure, the amplitude and the ratio between the pressures, in the majority of the men.